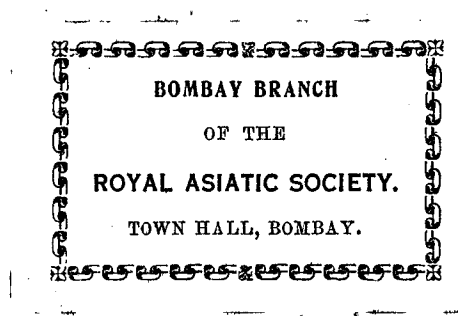


Arboriculture
in the Punjab,
Progress report
1893-94 to 1916-17



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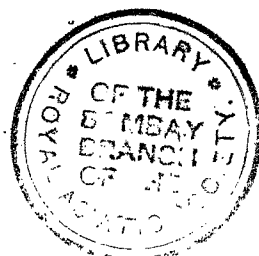
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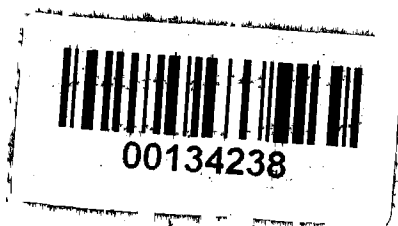


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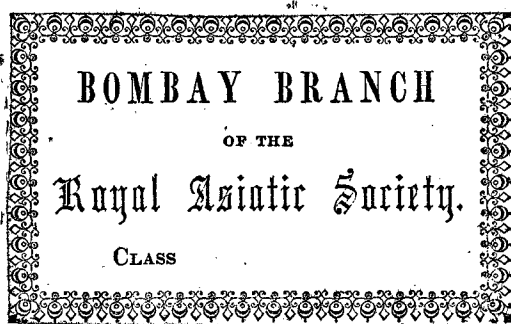
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CLASS

1893-94 to 1916-17

Proceedings of the Hon'ble the Lieutenant-Governor of the Punjab in the Forest Department,
No. 43, dated 21st January 1897.

READ—

The Report on Arboriculture in the Punjab during the years 1893-94 to 1895-96, submitted by the Conservator of Forests with his letter No. 1518, dated 19th September 1896.

REMARKS.—This is the fourth triennial Progress Report on Arboriculture and deals with the years 1893-94 to 1895-96. It is satisfactory to note that District Reports were submitted with fair punctuality, but District Officers have not yet devoted sufficient attention to ensuring accuracy in the prescribed returns. Unless the returns are accurate it is difficult to judge of the progress made in each triennial period.

2. The climatic conditions of the three years to which the report relates varied considerably. The first two were characterised by good rainfall, which, except in very few districts, was above the average, while in the third (1895-96) both the summer and winter rains were deficient. A certain amount of ground gained during the period 1893—1895 was therefore lost in the succeeding year.

3. The report has been divided into sections according as the development of arboriculture has been undertaken by district agency, private persons, the Irrigation Department, and the Public Works Department on provincial roads. Within each section the work has been classed as work done on avenues, groves, plantations and nurseries. In this review the work done and the progress accomplished by agency of all kinds in each class of operations will be treated together.

Before, however, passing to this part of the subject His Honor regrets to observe that the Conservator of Forests has again to draw attention to the fact that in very few districts has any progress been made in the preparation of detailed plans of operations. The importance of this matter was brought prominently to the notice of District officers in paragraph 5 of Sir J. Lyall's Review of the Report for the period 1887—1890 and in paragraph 6 of His Honor's Review of the Report for 1890—1893. But the districts of Delhi, Mooltan, Hoshiarpur and Muzaffargarh appear to be the only ones where plans of operations have been prepared. The 5 years plan of operations drawn up for Kangra has expired.

4. The length of roadside and canal avenues in existence at the end of this and of the former triennial period is shown in the following statement:—

	At the close of 1892-93.	At the close of 1895-96.
	Miles.	Miles.
Under District Agency	6,919	7,261
Under Irrigation Department	2,604	2,996
Under Public Works Department Provincial Roads	891	1,029
Total	10,424	11,286

There was thus a net increase in the mileage of avenues of 862 miles. During the three years under report 2,141 miles of avenues are shown as having

been newly planted by the above three agencies and 1,279 miles of avenues as having failed. But if we eliminate from these figures the entries made on account of corrections of previous returns and transfers from one department to another, we find that the actual mileage newly planted was 1,753, of which 903 miles failed, leaving an actual net increase of 850 miles as compared with an increase of 1,163 miles during the previous triennial period.

The districts in which tree planting along the district roads has met with most success are detailed in the margin, the figures showing the increase of mileage during the three years. In Delhi, Mooltan, Amritsar and Gujrat lengths of over 40 miles each were planted, but they practically all failed. In Mooltan at any rate this appears to have been due to the selection of species of trees unsuited to the soil and climate. In Umballa more than 71 miles of avenues were planted, but the total mileage fell during the three years from 324 to 196. It is explained, however, that this large decrease is nominal only, 28 miles of avenue having been transferred to the Public Works Department, mistakes in calculating the lengths of roads accounting for 50 miles, while 48 miles failed or were incorrectly shown in the returns for 1893. But even so, it would not seem that the new plantings met with much success.

5. The extension of avenues on canals and provincial roads calls for no remark. The former show an increase of 392 miles and the latter an increase of 139 miles.

6. The following statement gives the areas under groves and plantations at the beginning and end of the period under report :—

	GROVES.		PLANTATIONS.	
	At end of 1892-93.	At end of 1895-96.	At end of 1892-93.	At end of 1895-96.
	Acres.	Acres.	Acres.	Acres.
Under District Boards and Municipal Committees.	4,870	5,497	3,581	3,512
Under Irrigation Department ...	Nil.	Nil.	16,484	17,394
Under Public Works Department Provincial Roads.	1,154	1,156	157	156
Total ...	6,024	6,653	20,222	21,062

The districts responsible for the increase of 627 acres in the area under groves are Shahpur (181), Hissar (177), Gujrat (177), Ludhiana (109), and Kangra (59), while the only noticeable decrease is one of 94 acres in Umballa. The increase in Gujrat and Ludhiana is nominal, being due to the correction of faulty returns, and in Hissar the increase is

caused by transfers from nurseries and plantations. In Umballa the decrease follows from the omission of areas formerly styled groves, but which could not properly be classed as such. The only real addition to our groves due to planting consist of 59 acres in Kángra and 150 acres in Shahpur, where canal irrigation has now become possible.

The only noticeable change in the area under plantations is for that in the charge of the Irrigation Department, which shows an increase of 909 acres. After deducting the changes caused by the correction of errors in former statements and transfers the net increase is 787 acres, which took place chiefly in the Ferozepore Division, Sirhind Canal, and the 1st and 2nd Divisions of the Chenab Canal.

7. The area occupied by nurseries under District management increased slightly during the three years under report by 31 acres; that under the Canal Department fell by 1 acre only; and that under the Public Works Department Provincial Roads fell by nearly 8 acres. At the end of 1895-96 the total area planted with nurseries stood at 702.36 acres. The only important transaction under this head was the planting in 1893-94 of 164 acres in the Gujranwála District in the new colonies on the Chenab Canal. These should in time prove very useful to the settlers as a means of providing themselves with trees for planting in their allotments.

8. The cultivation of the Egyptian and Arabian date palms has again had considerable attention devoted to it, and has met with marked success in the districts of Jhang and Siálkot. The Gujranwála gardens have become famous for their oranges as has Kulu for its apples and pears. The Conservator of Forests notes that it is as yet too early to decide upon the success or otherwise of fruit growing in Kángra. Cuttings of American vine have been remarkably successful in Siálkot, and the mango is reported to be thriving in Jhang and Mooltan. In Hoshiárpur experiments were carried on with *Eucalyptus* and *Robinia* plants and met with fair success. The *robinia* and some *marram* grass from Australia are to be transplanted in the *chos*, where it is to be hoped they will prove useful in binding the soil together.

9. The financial results of all kinds of arboricultural operations during the last two triennial periods are compared in the following table:—

	Period.	Income.	Expenditure.	Surplus.	Deficit.
		Rs.	Rs.	Rs.	Rs.
District Boards and Municipal Committees.	1890—1893	5,25,320	8,29,574	...	3,04,254
	1893—1896	5,49,865	8,05,891	...	2,56,026
Irrigation Department	1890—1893	3,15,367	2,54,508	60,859	...
	1893—1896	2,59,251	2,37,899	21,352	...
Public Works Department Provincial Roads.	1890—1893	81,137	1,38,399	...	57,262
	1893—1896	1,01,803	1,15,109	...	13,306
Total	1890—1893	9,21,824	12,22,481	60,859	3,61,516
	1893—1896	9,10,919	11,58,899	21,352	2,69,332

The net deficit for the period under report was Rs. 2,47,980, which is Rs. 52,677 less than the net deficit for the preceding three years. Expenditure under all three

heads has decreased, while the revenue has increased in all except canal arboriculture, where the falling-off is accounted for by restricted sales of trees. The close approximation between revenue and expenditure on arboriculture on provincial roads is very satisfactory, and it is noteworthy that in the last year of the series (1895-96) the income for the first time actually exceeded the expenditure. It is believed that there is considerable scope for improvement in the arrangements for sale of trees and fuel and that good results would follow the application of a little energy and ingenuity to the working out of a scheme of operations after inquiry into local requirements and market conditions. An interesting account of what can be done in this direction is contained in the Ferozepore Report (page 11 of District Reports).

Owing apparently to some mistake in the Public Works Department offices items have been included in the expenditure in the Simla Provincial Division which have no connection with arboriculture.

10. Private landowners continue to take an increasing interest in the planting of fruit and timber trees in a large number of districts. The free distribution of seeds and saplings from Government gardens and nurseries should do much to encourage this feeling.

11. It is regrettable that in the present report no notice has again been taken of the scheme instituted in the Delhi District in 1884 for planting village common lands through the proprietary bodies of villages, to which attention was drawn in paragraph 11 of His Honor's last review. If the scheme has been abandoned, His Honor would be glad to have a report of the causes which led to this result.

12. It would be convenient if the Conservator of Forests would, in arranging the various District Reports, follow the prescribed order of districts. This would not in any way affect the grouping of districts adopted by him in the body of his report.

ORDER.—Ordered that the above remarks be printed and circulated with the Report as usual; also that they be published in the *Punjab Government Gazette* and forwarded with the usual number of copies of the Report to the Government of India, Revenue and Agricultural Department; also that they be forwarded to the Secretary to Government, Punjab, Public Works Department, the Chief Engineer, Irrigation Works, Punjab, the Conservator of Forests, Punjab and to the Commissioner and Superintendent, Delhi Division, with reference to paragraph 11.

By order of the Hon'ble the Lieutenant-Governor,

M. W. FENTON,

Revenue Secretary to Government, Punjab.

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No. 1518.



FROM

C. F. ELLIOTT, Esquire,

Officiating Conservator of Forests, Punjab.

TO

THE REVENUE SECRETARY TO GOVERNMENT, PUNJAB.

Dated LAHORE, the 18th September 1896.

SIR,

I have the honour to forward the Progress Report on Arboriculture in the Punjab for the three years 1893-94 to 1895-96. The arrangement of the subjects is the same as in previous reports.

2. The reports were submitted with fair punctuality, but the remarks made in paragraphs 2 and 3 of the last report may be repeated, *viz.*, that a large amount of correspondence is still entailed, owing to inaccuracies in the preparation of the returns. These corrections make it difficult to ascertain from the statements the actual work done during the three years.

3. There has been very little progress in the preparation of plans of operations. Most reports do not mention them at all. A plan for five years' work has been prepared for the Delhi district, and plans are to be prepared for Multan and Muzaffargarh. The Kangra quinquennial plan came to an end in 1893-94. The Tahsildars were then asked to report on the results of the five years' working and to make suggestions for the future. In consequence it has been decided to reduce the expenditure on arboriculture to Rs. 1,000 per annum. In Hoshiarpur also the plan of operations sanctioned for the district has been completed. The Deputy Commissioner says nothing about a new plan, but an improved system of arboriculture has been introduced since July 1895, and all the main roads are now stocked, so that perhaps a new plan is not required.

4. Pruning is a point to which greater attention should be paid in some cases. It is better not to prune at all than to prune badly. At a place, not three miles from a *Sadr* station, I found that the lopping was being done gratis by goat herds, in return for the right to the leaves. The result was deplorable. I would suggest that the advice and aid of Forest Officers should be more freely invited in all matters connected with district arboriculture.

5. I have to thank my Personal Assistant, Mr. E. M. Coventry, for his labours in compiling this report, which has entailed a great deal of correspondence and much work in the collection and orderly arrangement of details and figures.

A.—GENERAL REMARKS REGARDING THE SEASONS.

1. The rainfall of the period is exhibited in Statement No. I, which gives details of the summer and winter rains. From these figures it will be seen that, on the whole, in the eastern, central and north-western districts the rainfall of the first two years has been above, and that of the third has been below, the average, but that the case is different in the northern, western and south-western districts. In Multan, Dera Ismail Khan, Karnal, Gurdaspur, Kangra, Ambala and Simla the rainfall of all three years has been above the average. Five of the arid districts, *viz.*, Muzaffargarh, Dera Ghazi Khan, Montgomery, Jhang and Hissar show a deficient rainfall in the second year, and five in the same tract, *viz.*, Muzaffargarh, Multan, Dera Ismail Khan, Montgomery and Jhang exhibit an excess in the third year. It is curious to note that in Montgomery in the first two years the rainfall was deficient and in the third above the average.

2. In 1893-94 good rain fell everywhere, except in Montgomery, where the summer rains were deficient.

3. In 1894-95 also the rainfall was heavy, except in the five districts mentioned above, where the summer rains were below the average.

4. In 1895-96 both the summer and the winter rains were below the normal in most districts, which greatly impeded the progress of arboriculture. The first two years were favourable, but in some cases young plants were damaged by floods.

B.—DISTRICT ARBORICULTURE BY GOVERNMENT AGENCY..

(a).—GENERAL.

5. The following abstract shows the progress made in avenues during the three years under report as well as the figures of the previous triennial period :—

1	2	3	4	5	6
YEAR.	Length of roads and canals suitable for avenues.	LENGTH OF ROADS AND CANALS.			
		Fully stocked at the beginning of the year.	Planted during the year or period.	Which failed during the year or period.	Fully stocked with plants or trees alive at the end of the year or period.
	Miles.	Miles.	Miles.	Miles.	Miles.
1890-91 to 1892-93 ...	12,640·75	6,124·80	1,321·76	518·05	6,928·51
1893-94	12,790·23	6,928·51	474·00	276·82	7,125·69
1894-95	12,771·77	7,125·69	311·17	210·72	7,226·14
1895-96	12,787·32	7,226·14	279·57	244·91	7,260·80
1893-94 to 1895-96 ...	12,787·32	6,928·51	1,064·74	732·45	7,260·80

From the above it will be seen that the length of avenues has increased by 332·29 miles during the triennial period under report against 804·71 miles in the previous period. After excluding from the figures in columns 4 and 5 the entries made on account of corrections of previous returns and transfers, the actual area planted during the period under report amounts to 1,041·80 miles, and the actual failures to 595·76 miles, or a net increase of 446·04 miles, compared with 714·42 in the previous period.

6. The statement given below shows the progress made in groves :—

1	2	3	4	5
YEAR.	AREA OF GROVES.			
	At the beginning of the year or period.	Planted or transferred from nurseries during the year or period.	Which failed during the year or period.	Stocked with trees or plants alive at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93	4,256·68	698·44	85·08	4,870·04
1893-94	4,870·04	371·30	31·62	5,209·72
1894-95	5,209·72	260·94	115·40	5,355·26
1895-96	5,355·26	193·81	51·68	5,497·39
1893-94 to 1895-96	4,870·04	826·05	198·70	5,497·39

From the above it would appear that there was a net increase of 627·35 acres to the area of groves, but if the entries, owing to adjustment of previous errors, transfers, &c., be excluded, the actual work done was the planting up of 295·72 acres, of which 174·33 acres failed.

7. The following statement shows the progress made in plantations :—

1	2	3	4	5	6
YEAR.	Area taken up for plantations at the beginning of the year or period.	AREA OF PLANTATIONS.			
		Successfully stocked at the beginning of the year or period.	Sown or planted during the year or period.	Which failed during the year or period.	Stocked at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93 }	7,801·54	2,480·95	1,610·73	510·54	3,581·14
1893-94 ...	7,708·37	3,581·14	151·87	84·18	3,648·83
1894-95 ...	7,624·87	3,648·83	99·72	222·95	3,525·60
1895-96 ...	7,569·67	3,525·60	38·34	51·32	3,512·62
1893-94 to 1895-96 }	7,569·67	3,581·14	289·93	358·45	3,512·62

There has been a net decrease of 68·52 acres during the period under report.

8. The following abstract shows the work done in nurseries :—

1	2	3	4	5
YEAR.	AREA OF NURSERIES.			
	At the beginning of the year or period.	Added during the year or period.	Given up or transferred to groves during the year or period.	Remaining at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93 ...	288·09	378·55	76·84	589·80
1893-94 ...	589·80	181·32	48·14	722·98
1894-95 ...	722·98	19·57	211·20	531·35
1895-96 ...	531·35	101·33	11·79	620·89
1893-94 to 1895-96 ...	589·80	302·22	271·13	620·89

The area under this head has thus increased by 31·09 acres.

(b).—DETAIL OF WORK DONE.

I.—Avenues—Arid Districts.

9. In the Muzaffargarh district 12·73 miles were added to the length of roads fully stocked with trees, bringing up the total length of avenues at the end of the three years under review to 119·997 miles. The increase during the last three years was about double that of the previous triennial period, and is said to be due to the interest taken in arboriculture by the Local Boards of Alipur and Sanawan, where the progress was greatest.

10. At the end of 1892-93 213.44 miles in the Multan district were stocked with trees. 57.85 miles have been newly planted, of which 48.54 miles failed, leaving 222.75 miles fully planted up at the close of the period. Orders have been issued that only *frásh* and *kíkar* are to be planted in future, as it has been found by experience that in an arid district, like Multan, other species are not successful.

11. 8½ miles of avenues were planted in the Dera Gházi Khan district, thus bringing the total up to 35 miles out of 114 miles suitable for avenues. *Sissu* and *Melia indica* are the species preferred for avenue planting in this district. The Deputy Commissioner reports that though *Albizia Lebbek* is a fast grower, and is much sought after by *zamíndárs*, owing to its excellent fodder, it is so short lived that it is of little use as an avenue tree.

12. In the Dera Ismail Khan district 44 miles of avenues were stocked with trees at the close of the last triennial period. The length now planted up amounts to 49.75 miles, out of 190 miles suitable for avenues. *Frásh*, *kíkar*, *síras* and *shísham* are the species most commonly planted.

13. One mile of avenue was newly planted in the Montgomery District, otherwise the work done consisted in the maintenance and protection of existing plants and the filling up of gaps. Arboricultural operations are greatly hampered in this district by the bad soil, white ants and want of water.

14. The irrigation of roadside trees is attended with much difficulty in the Jhang district. Where there are wells near the roads, the villagers generally require all the water for their own fields. Tree planting is, however, possible in the stretch of land between the Jhelum and the Chenáb. During the three years 1.68 mile of road were planted up, of which .65 mile failed. It is expected that greater progress will be made in arboriculture, as soon as the Chenáb Canal has been extended throughout the district.

15. In Bannu 8,836 plants were put out during the three years, of which 2,930 died. Previous to 1893 much attention was given to the avenues on the Kohát-Dera Gházi Khan road, but they have now been transferred to the Public Works Department. The district roads are being planted up.

16. Considerable progress has been made in arboriculture in the Shahpur district. During the period under report 40 miles of road were planted with avenues, bringing up the total length stocked with trees to 526, out of 552 miles suitable for avenues.

17. There has been no alteration in the length of roads planted with avenues in the Hissár district. Avenues consisting of single lines of trees exist on 29 roads. As mentioned in last year's report, it is regrettable that, out of a total length of 399.4 miles suitable for avenues, 108.26 miles only have been planted up.

Very Dry Districts.

18. Existing avenues were maintained and gaps therein filled up in the Ferozepore district. *Kíkar* and *shísham* are the species chiefly planted. The former is supposed to be mature after 16, and the latter after 40, years. *Kíkar* is considered the most useful tree for cultivation from all points of view, owing to its rapid growth, though *shísham* timber is superior. It has been found by experience that the best and cheapest way of growing it is to dig long narrow ditches and sow the seed on the soft soil. The ditches are then filled with water from the inundation canals, and the plants are left alone, until they are large enough to require thinning.

19. A large amount of work was undertaken in the Pesháwar district, 170 miles of road being planted up, of which 82 failed, the failures being due in some parts to the attacks of white ants, and in others to drought.

20. 9.88 miles of avenues were planted up in the Kohát district during the triennial period, of which 4.80 miles failed, the length of avenues fully stocked now amounting to 10.29 miles out of 14.32 miles suitable for avenues.

21. During the years under report 14 miles of avenues were planted with trees in the Rohtak district, of which 3.5 miles failed, leaving 196.93 miles stocked with trees at the end of 1895-96 out of 415.08 miles suitable for avenues. Altogether 7,469 plants were put out, of which 21.9 per cent. failed, the figures for the previous period being 16,351 and 16.2 respectively. The plants are kept in the nursery till they are 3 to 5 feet high. They are transplanted partly in the spring, *i.e.*, 15th February to the end of March, and partly in the rainy season.

22. In the Lahore district the work done consisted principally in the maintenance of existing avenues. However, 40.062 miles were planted up, including 10.46 miles transferred to the Lahore Provincial Division. Thus the total length of avenues fully stocked amounts to nearly 229.69 miles, while 83.72 miles still remain to be planted up.

23. Arboriculture operations were not attended with great success in the Karnál district. 1,350 plants were put out and in addition 1,653 were planted to fill up gaps, whilst 2,714 plants failed. However, a net addition of 3.51 miles was made to the length of avenues, bringing the total up to 81.30 miles out of 241.70 miles suitable for avenues.

Dry Districts.

24. 43.708 miles were newly planted in the Jhelum district, of which 3.002 failed. The total length of avenues planted up amounts now to nearly 330.90 miles out of 422.53 suitable for avenues. Altogether 9,736 plants were put out, of which 8 per cent. failed, against 16 per cent. in the previous triennial period.

25. During the first two years 56.55 miles of avenues were planted up in the Gujránwála district, of which 4.59 miles failed. 27 roads with a length of 164.99 miles are now fully stocked with trees out of a total length of 457.83 suitable for avenues. In the Háfizabad and Khángah Dográn tahsils the plants are irrigated from the Chenáb Canal, elsewhere *bhistis* are employed. *Kíkar*, *shísham* and *frásh* are said to be the most suitable species for this district, but only the two former are now planted.

26. In the Gurgáon district very poor results have been obtained during the triennial period, but no explanation is given in the Deputy Commissioner's report. In the previous period also arboricultural operations were not very successful. In 1893-94 6.9 miles were planted, of which 3 miles failed, in 1894-95 only one mile was successful out of 18 miles planted, and in 1895-96 0.75 miles out of 1½ mile. Thus about 5.65 miles have been added to the length of avenues fully stocked, bringing up the total to 259.45 miles out of 396.15 miles suitable for avenues.

27. The percentage of failure is also very high in the Amritsar district, *e.g.*, 10,113 plants failed out of 13,750 put out; nevertheless the length of avenues under the District Board was increased by 4.66 miles, and that under the Municipality by 2.85 miles, bringing up the total length fully stocked to 172.5 and 51.1 miles, respectively.

28. In Delhi too arboricultural operations were not very successful. 46.94 miles of new avenues were planted and 47.3 miles failed, giving a net decrease of 0.36 mile, whereas in the previous period there was an increase of 75.29 miles on district roads and 25 miles in the municipality. The failures were principally in the *kíkar* sowings on unmetalled roads, and are said to be due, in the first two years to bad soil and floods, and in the third year to drought. Plants put out from nurseries gave fairly good results. Full details of the work done are given in the Deputy Commissioner's report.

29. $6\frac{1}{4}$ miles were planted up in Jalandhar during the three years. There are now some 225 miles of avenues to look after, and the District Board is unable to do much towards their extension, owing to want of funds and suitable establishment.

30. Arboriculture operations in the Ludhiána district have been more successful than in the four districts mentioned above. Altogether 8,121 plants were put out along 21.12 miles of roads, while 3,932 were planted to fill up gaps. *Shisham* is the species chiefly planted, but during the last two years 500 mango plants have been grown and are doing well. No attempts have as yet been made to plant *kíkar*, which grows plentifully in this district and reaches a large size. About 30 miles still remain to be planted.

31. The report of the Ráwalpindi district gives no details of the work done, but according to Statement No. V 11.99 miles were planted up and 17.38 miles failed, the length of avenue now fully stocked amounting to 335.79 miles.

Fairly Moist Districts.

32. During the period under report 37,712 plants were put out on 50.48 miles of avenues of the Gujrát district, of which 34.23 miles failed. A large number of trees were blown down by storms in 1894. These are probably trees that have been girdled by villagers, referred to in paragraph 33 of last report.

33. The length of avenues fully stocked in the Gurdáspur district at the end of 1895-96 amounted to 466 miles out of 605.39 suitable for avenues, compared with 426.8 at the end of the last triennial period.

34. There were only 196.28 miles of avenues in the Ambála district at the close of the period, compared with 323.99 at the end of the former period. This large difference is due to (1) the transfer of 28 miles of road to the Public Works Department, (2) mistakes in the calculation of the lengths of roads, 50 miles, (3) failures and incorrect returns submitted at the end of last period, 48 miles. The present figure has been arrived at after reference to the Tahsildárs. The Deputy Commissioner gives figures for the number of trees in the different avenues, adding that they have been calculated in his office, and asks whether it is desirable that trees in avenues should be counted. There seems to be no object in this. All we want to know is the progress that has been made, *i.e.*, the length of avenue planted and that has still to be planted, &c., *i.e.*, what can be shown in Statement No. V. Figures for the number of trees planted do not convey any very definite impression, the plants are put out at different distances apart and there may be only one, or two or more, lines of trees.

35. 62.25 miles have been successfully planted during the three years in the Siálkot district, bringing up the total fully stocked to 541.74 miles out of a total length of 838½ miles suitable for avenues. But besides this several miles of inner lines of trees have been planted on various roads. The remarks of the Deputy Commissioner regarding the species planted are interesting. As in other districts *shisham* and *kíkar* are preferred. The further planting of *siris*, *ber* and *bakáin* has been discontinued. The two former are lopped and disfigured by goat herds, whilst the latter is short lived and gives little shade, and is therefore unsuitable for avenue planting.

36. During the period 6.34 miles of avenues were planted with trees in accordance with the plan of operations sanctioned for the Hoshiárpur district; the plan has now come to an end. 29,981 plants have been put out of fourteen different kinds, the majority being *shisham*, and the next most numerous mango and *pípal*. All the principal main roads have now avenues along them. Rules, regarding the manner in which roadside trees should be pruned, have been issued by the Deputy Commissioner. The latter reports that of late years there have been many disputes, especially in the civil station, regarding the ownership of roadside trees, which have been planted and cared for by the

District Board, and which are now full grown and of considerable value. No claims were put forward while the trees were young and useless. It appears that, when the avenues were first laid out, little regard was paid to the question as to whether the land belonged to the villagers or to the District Board.

37. In the Simla district 2·66 miles have been planted near Kálka; elsewhere the roads are too hilly for avenues.

38. Most of the roads of the Hazára district also are in hilly tracts, where tree-planting is unnecessary, or very difficult. A few miles of road were newly planted, but the work done during the period has consisted mostly in filling up gaps.

39. 49·615 miles were successfully planted in the Kángra district, or about the same length as in the previous triennial period. The percentage of failure was higher, viz., nearly 55 per cent. against 43 per cent. This was probably due to attempting too much in 1893-94, when nearly 67 miles were planted, of which 39 miles failed. No arboricultural operations were carried on in the Kulu Sub-Division.

II.—Groves and Plantations.

40. 4·52 acres were added to the area under groves in the Muzaffargarh district, while 1·23 acres failed. Fruit trees were planted in the Muzaffargarh tahsíl compound and the Alípur Munsiff's Court compound. In Multan and Dera Gházi Khan there was no alteration in the area of groves and plantations, but in the latter district the Khánwah plantation is being extended.

41. 4·9 acres of groves failed in Dera Ismail Khan, owing to low water in the River Indus. The area under this head now amounts to 12·6 acres. There was no change of area in Montgomery. The existing trees are grown up, and are mostly *kíkar*, *shísham*, *ber* and *siris*.

42. The Sahjawál plantation is the only important one in the Jhang district. It is situated on the left bank of the River Jhelum on fertile soil, and furnishes timber, grass and *munj*. The Bela Baggar plantation only contains a few *shísham* trees. It was damaged by the River Indus some years ago. In the Bannu district 1,192·66 acres are under *shísham* plantation, but it is believed that only about 500 are fully stocked.

43. The area under groves has largely increased in the Shahpur district, since canal irrigation has become possible.

In the Hissár district 72·51 acres of the Hánsi Bir have been newly planted, and 5·9 acres have failed. The area under groves was added to by the transfer of 163·24 acres from nurseries and 22·04 from plantations, while 21·44 acres failed. The Kehruwála plantation of the Ferozepore district is in a flourishing condition, and the Mamdot plantation is also doing well, as it is irrigable from a branch of one of the inundation canals.

44. About 2 acres of land under nurseries in the Pesháwar district were transferred to groves. There was no alteration of area in the Rohtak district. The 30 acres sown with *kíkar*, referred to in the last report, have failed, owing to drought. There are 15 groves in the Karnál district with an area of 317·37 acres. 614 plants were put out and 720 died, leaving 3,198 trees and plants alive at the end of the period. In the Gujránwála district 1·51 acre was transferred from nurseries to groves.

45. The area taken up for plantations in the Gurgáon district is 2,156 acres, of which 114·8 acres were stocked at the beginning of the triennial period. 13½ acres were planted in 1894-95 at Banjar Guráora in the Rewári Tahsíl, but owing to drought this operation was a failure. In the following year a further trial was made with no better result, due to the difficulty of supervising the watering of the plants.

46. In the Tilauni rakh of the Delhi district 140 acres were sown up with *kíkar*, and 180 acres failed, owing to floods from the Jumna river. 7·49 acres of *bunds* were also sown up with *kíkar*, of which 2·87 failed, owing to damage done by cattle and drought. Thus there was a decrease of 35 acres, compared with an increase of 34 in the previous period. A grove of prickly pear was formed on the ridge at Delhi, and 6 new groves were planted in different parts of the district.

47. In Jalandhar the plantations, which contain *shísham* and *kíkar*, are situated on low-lying ground near the Sutlej and are liable to inundation. Three plantations, with an area of 37·57 acres, were cut down and the trees sold, as they were in danger of being washed away by floods. 45 acres were leased for cultivation, the trees having been felled in previous years. The area under this head now amounts to 81·43 acres. One acre was added to the area under groves in the Ludhiána district, and a further addition of 108·06 is due to omissions in previous returns.

In the Gujrát district the area under groves at the end of 1896 was 176·82 acres, while 0·48 acre was added to the area under plantations.

48. There was a small addition to groves in the Gurdáspur district in consequence of plants in nurseries having become too large to transplant. 112·90 acres were shown under groves in the Ambála district at the end of the last period, but the returns have been corrected after reference to the Tahsildárs, and the acreage is now reduced to 18·94 acres by the omission of areas that could not properly be classed as groves. 2 acres of land, reclaimed from the Aik *naddi* near Siálkot, have been planted with *shísham*, which are in a promising condition. A small area was also added to groves by transfers from nurseries.

49. There was no alteration of area in Hoshiárpur. It is proposed to cut down a grove of old mango trees in the station garden, which bring in no appreciable revenue, and to convert it into a nursery, where trees will be raised and distributed to *zamíndárs*. The encamping-ground at Kálka, area 13·62 acres, is the only grove in the Simla district.

50. Trees were planted on a *bund* near the Harípur-Serái Kála road of Hazára, and are doing well. A large number of plants are put out every year in the Sarban and Abbottabad rakhs, but very few succeed, owing to the scarcity of water in the hot weather. Existing trees are said to be in a flourishing condition. 6 acres were added to the tahsíl garden at Pálampur in the Kángra district and planted with fruit trees received from the Simla gardens. The grove on the Núrpur dák bungalow hill has not been a success. The soil is very shallow, a sheet of impermeable rock occurring close beneath the surface. *Chíl* seed has been sown and several species have been planted, but at the present time all that exists is a few *chíl* saplings along a depression in the ground, the remainder of the area being covered sparsely with brushwood. Nothing can be done here until, after a lapse of years, the soil has increased in depth and fertility.

III.—Nurseries.

51. Two new nurseries were laid out in the Muzaffargarh district during the triennial period, in order to supply plants for the Muzaffargarh-Rohillánwáli road. 2 nurseries were carried away by river action in the Shujabad tahsíl of Multan and were not replaced, as young plants were easily obtainable from villagers. 2 nurseries were planted with vegetables by mistake in Dera Gházi Khan, but this error will be remedied. The nurseries contain a number of young fruit and other trees and shrubs, which are distributed gratis.

52. An area of 1·3 acre was added, and a new nursery was formed at Dera Ismail Khan, and stocked with a large number of fruit trees and trees suitable for roadside planting. No areas are specially set apart for nurseries in Montgomery, but small plots in gardens are kept stocked with cuttings and young plants. There were 3 nurseries existing at the commencement of

1895-96 in the Jhang district, and 3 were added, bringing up the total to 17·3 acres. In Bannu 3 new nurseries were formed and one was made over to the Public Works Department.

53. A very small addition was made in Shahpur, and in Hissár 163·24 acres were transferred to groves. Nurseries of *pípal* trees have been formed in the Ferozepore district. The plants will be put out in encamping-grounds and other suitable places. 63 acres of land were taken up for nurseries in the Pesháwar district, and 2 acres were transferred to groves. Small additions were made to nurseries in Kohát, but the supply of plants was insufficient for planting out on roads, so they were obtained from private gardens at Kohát and the Government garden at Lahore.

54. Three nurseries exist in the Karnál district with an area of 8·53 acres. No alterations took place during the period under report. 2·335 acres were added to the area under nurseries, chiefly in gardens, in the Jhelum district. The plants raised are chiefly fruit and *shísham* trees, of which the former are grown from cuttings.

55. A large addition was made to nurseries in Gujránwála, and 2·83 acres were partly transferred to groves and partly used up. It is proposed that settlers on the Chenáb Canal should be allowed to make use of these nurseries. There were 3·11 acres under nurseries at the commencement of the period in the Gurgáon district, but the Deputy Commissioner reports that they have gradually been abandoned, owing to want of supervision, and that there is now nothing to show in the way of nurseries. It is proposed to re-introduce the system of each tahsíl having its own garden, which is found by experience to be the best system.

56. 5·75 acres along 4 miles of road in Amritsar were sown broadcast with *kíkar* seed, and a large proportion of plants have grown to a height of 2 feet. In the Delhi district there were 4 nurseries at the commencement of the period, of which 2 have been transferred to groves, one given up and one slightly enlarged, whilst 4 new nurseries have been formed. The Delhi Municipality obtains the young plants it requires from private gardens.

57. There are 12 nurseries in Jalandhar which are sufficient for all requirements. 19,019 plants were put out and 20,154 given free to *zamíndárs*. There is only one nursery left in Ludhiána, as all the others have been exhausted. New ones will be formed where planting operations are going on. A nursery is maintained at Cherrapani in the Ráwalpindi district, from which young fruit and other trees are liberally distributed gratis. 3 acres were added to this nursery and partly laid out as an orchard.

58. 2·984 acres were newly planted in Gujrát and 3·8205 were abandoned, as they were used up. Nurseries near roads are maintained and looked after by *zamíndárs*, who receive a small payment for their trouble. There are 9 nurseries in Gurdáspur, of which the largest is at the Gurdáspur encamping-ground. An income is derived from the sale of fruit trees to private persons.

59. In the Ambála district 0·15 acres was planted, ·05 failed and 21·97 acres, which were nurseries merely in name, were given up, the area remaining as nursery at end of period amounts to 2·07 acres. Some of the smaller nurseries on the roads of the Siálkot district, which are fully stocked with trees, were abandoned, thus reducing the total acreage to 6·79. The present ones are nearly exhausted, as much work has been done of late years, but they will be re-stocked.

60. Nurseries were formed in the Hoshiárpur district at convenient spots on roadsides for filling up gaps. 1·25 acre in all was added, bringing up the total under this head to 5·98 acres. 8 acres, situated in the Mahásu Orchards, are under nurseries in the Simla district, whence 2,985 fruit trees were distributed.

61. There are 9 nurseries in the Házára district. About 500 young trees were distributed free, or at a nominal cost, to *zamíndárs*, and 2,035 were sold at 1 anna each to the Grass Committee of Abbottabad for the military road. A small addition was made to the nursery at Mánsehra. $\frac{1}{8}$ acre was added to the nursery at Pálampur in the Kángra district.

IV—Government Gardens.

62. Several reports give no information about the condition of Government gardens. Experiments with the Egyptian date-palm have been successful in several districts, and a good deal of attention has been paid to the cultivation of fruit trees.

63. Two gardens are maintained by the Municipality and 7 by the District Board in Multan; 6 of the latter contain good mango, date-palm and other fruit trees, as well as ornamental trees. 119 mango trees were planted in the Am Khás garden in 1892-93. They are in good condition, and a number of them are about to bear fruit. The fruit gardens at Leiah, Bhakkar and Tánk in the Dera Ismail Khan district are progressing favourably, and much improvement has taken place in the two former.

64. Date-palm seed was obtained in 1891-92 and sown at various places in Jhang. The plants at Shorkot are reported to be in good condition. In the station garden grapes have not done well, grafted mangos are progressing, lemon trees have generally been successful, but oranges have failed. Several fruit trees were planted in this garden and also at Chiníot, but the supply is inadequate to allow of any distribution to villagers at present. The stock of young plants in the Bannu Government garden for distribution has fallen very low, but the nurseries are being restocked.

65. There is only one Government garden in Kohát. It contains various kinds of fruit trees and vegetables, and has greatly improved of late. A large number of fruit trees was planted out, and they are apparently doing well. The garden has now become self-supporting. The Arabian date-palm seedlings that were distributed to different persons have mostly proved a failure. Five trees, however, have reached a height of 8 feet and have borne fruit.

66. In Rohtak some date-palm seedlings, obtained by broadcast sowings in the previous period, were sent to the Tahsildárs for distribution to villagers, but owing to the scanty rainfall they were a complete failure. In Karnál also experiments with this species have not been very successful. However, about 70 plants, grown from seed, are alive and doing well, and have attained a height of 5 to 6 feet. Besides these a few plants, obtained from the offsets received from Egypt in 1891, exist and are in good condition.

67. In Gurgáon to increase the revenue the garden bullocks were let out on hire, but this had to be stopped, as the garden naturally suffered from want of water. The Roshnára garden near Delhi has been much improved by cutting down old trees and opening out roads.

68. There is one ornamental garden in Jalandhar, the Empress or Town Hall garden. It is partly laid out with grass and partly with fruit trees and vegetables. It has greatly improved since October last, as the Deputy Commissioner has given a great deal of attention to the garden; before that time the *máli* in charge had allowed it to go to ruin. There are four other small gardens in the district.

69. In the Ludhiána district, there are 4 fruit gardens, but no ornamental gardens properly so called, though a portion of the rakh is used as a flower garden. Six gardens are maintained in the Ráwalpindi district for the propagation of fruit trees and flowers. Large supplies of young fruit and other trees are distributed annually to *zamíndárs* and other persons.

70. There are about 85 Egyptian date-palm seedlings in the Gujránwála station garden, which have reached a height of 4 to 5 feet. The District Board

maintains 5 gardens, the largest of which is at head-quarters with an area of 20 acres. These gardens are famous for their oranges, which are largely cultivated by the District and Municipal Boards and by private persons. Four gardens, of which two are orchards, are maintained by the Municipality. There are also small gardens at Wazirabad and Rámnagar.

71. The gardens at Gujrát suffered a good deal from storms and drought. A few mango and orange trees were planted during the triennial period. Apple, pear, peach and plum trees were received from Simla, and planted out in different gardens in Gurdáspur, where they are doing well.

There are only 2 Government gardens in Ambála, *viz.*, the Ambála District garden, which is an ornamental or flower garden, and the Morni experimental garden, which was started with the object of trying experiments with the cultivation of tea and fruit trees. The Deputy Commissioner proposes that the latter garden should be transferred to the Forest, or some other, Department, as its maintenance is a heavy drain on the District Board's resources.

72. In Siálkot cuttings of American vine, received from Simla a few years ago, are doing well and have already borne fruit. Experiments with the Egyptian date-palm have been very successful. Several hundred plants have been distributed over the district, most of which are doing well. About 100 were planted in the Cantonment gardens and on the plateau of the fort in 1890, some of which are already bearing fine large fruit. There are still several hundred plants ready for transplantation.

73. Experiments have been tried with five species of *Eucalyptus* in Hoshiárpur. There is a fine avenue of *E. tereticornis* on one of the station roads, and this species has also been grown successfully at Hoshiárpur and Una. Experiments with *E. rostrata* have also succeeded pretty well, but the three other species—*E. goniocalyx*, *globulus* and *citriodora*—have failed. A few trees have now attained a girth of over 6 feet. *Robinia* plants have been raised at different places and are to be transplanted in the *chos*, but experiments with the seed of *Acacia melanoxylon*, obtained from Nainital, have been unsuccessful. The Deputy Commissioner gives the name of some grasses and trees that have been found useful for binding the soil on the banks of *nullahs* and embankments.

74. Fruit trees are grown in the Mahásu orchard, a few miles out of Simla. Prior to 1893 they were distributed to Government officials, who owned estates in Simla, and to the adjoining Native States. Since that year the distribution to Native States has continued, but the greater portion of the plants has been made over to the Tahsildárs for distribution to *zamíndárs*, who have taken a keen interest in fruit culture.

75. There are several fruit gardens in Hazára, especially in the Harípur tahsil, and a large establishment is kept up for their maintenance. About 800 fruit trees were obtained from the Anandale garden, of which 200 were distributed, and the remainder planted in different gardens. Those planted in the Mánsehra garden suffered a good deal from drought. Fruit trees are distributed free, or at a nominal cost, to villagers, so far as the nurseries can admit of this distribution.

76. A good deal of fruit cultivation is also carried on in the Kángra district. Several plants were received from Simla and a few from Lahore. Some were planted in the different gardens and the others distributed to various persons. It is too soon yet to decide on the success or otherwise of fruit growing in Kángra. However, the Deputy Commissioner reports that apple trees have commenced to bear fruit at Dharmsála and in Kulu, and that the fruit is excellent. Cherries apparently are not a success anywhere, which is remarkable, as the wild cherry is a common tree. The rainfall is too great in the Kángra valley for pears to do well, but they do better in Kulu.

(c).—CATTLE-TRESPASS AND LOPPING.

77. There is not very much to note under this head. Thorn fences and mud walls are the ordinary means used for the protection of young plants. Cactus hedges are used in Jalandhar, and this has also been found

the most effective way of preventing damage from cattle in Hoshiárpur, as well as the most economical and durable. Plants are seldom put out less than 4 to 5 feet high, so that the fences are made about 5 feet in height. Mud walls are of little use in this district, as they tumble down during the rains. Where *cactus* is not available, dry thorns or branches are used. In Gujránwála station iron fences are being tried as an experiment.

78. In most districts an establishment is maintained for the protection of the young plants, and cattle found damaging them are sent to the pound. In Jalandhar 18 suits for damages were also instituted.

79. The Deputy Commissioner, Siálkot, reports that great damage is done to *siris*, mulberry, *ber* and *kíkar* trees, young and old, by goat herds, who lop trees even up to 20 feet from the ground. It is proposed to make the *zaildárs* and *lambardárs* responsible for the trees near their villages.

80. Lopping under supervision is carried out in most districts, but several reports give no information on the subject.

(d).—FODDER TREES.

81. In most districts no special measures appear to be taken to grow trees suitable for fodder, but *kíkar*, *pípal*, *banyan*, *siris* and other fodder trees are found growing along most district roads. The former species is extensively grown in the arid districts, and during 1895-96 attention has been paid to planting out *pípal* trees and cuttings in the Hoshiárpur district; it is intended to increase the proportion of *pípal* trees on roads to be planted out during the next triennial period. *Kíkar* has not been planted out, as a rule, in this district, as it does not satisfy the conditions of a good avenue tree, but a larger number are to be planted in future.

(e).—FINANCIAL.

82. The following statement shows the financial results of the period under report as compared with the figures of the three preceding triennial periods:—

1	2	3	4	5
Year.	Income.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
1884-85 to 1886-87	1,92,874	4,36,519	...	2,43,645
1887-88 to 1889-90	3,64,145	7,05,868	...	3,41,723
1890-91 to 1892-93	5,25,320	8,29,574	...	3,04,254
1893-94	1,86,209	2,74,410	...	88,201
1894-95	1,70,189	2,68,163	...	97,974
1895-96	1,93,467	2,63,318	...	69,851
1893-94 to 1895-96	5,49,865	8,05,891	...	2,56,026

From the above it will be seen that the income from arboriculture is still rising, and that an increase of Rs. 24,545 took place during the period under report. On the other hand, there has been a decrease in expenditure of about the same amount, and the deficit is less by about half a lac compared with the figures of the previous triennial period. The revenue and expenditure have remained fairly constant during each of the three years.

C.—DEVELOPMENT OF ARBORICULTURE BY PRIVATE PERSONS.

83. A good deal of progress has taken place, especially in the moister districts, in tree planting by private persons. In several districts fruit and other useful kinds of trees are distributed free to *zamíndárs*, or a merely nominal price is charged. This has done much towards increasing the general interest in arboriculture.

84. In the arid districts arboriculture is carried on under difficulties, and not much has been done. In Muzaffargarh landowners have planted mango trees on their land where it adjoins the main road. Many fruit and other trees are distributed, and many gardens have been formed on *sailába* land in Dera Gházi Khan, but the people are much discouraged, as many gardens have lately been carried away by floods.

85. As regards the very dry districts progress has been greatest in Pesháwar and Kohát, where much care is bestowed on the cultivation of fruit trees, in places where water is available. The climate and soil of Kohát proper is said to be especially favourable for fruit culture. In this district every endeavour is made to impress on the people the advantages of village fuel and fodder reserves, but the large majority are said to be apathetic to the last degree, and to care nothing so long as their flocks and herds can eke out an existence on the scanty vegetation. In Ferozepore, owing to the scarcity of rain in 1895-96, the villagers have suffered greatly, and have sold off the trees on their lands to a large extent.

86. From Amritsar it is reported that the interest of private persons in arboriculture is increasing. Several fruit gardens have been planted during the last three years, and the *zamíndárs* have taken to planting their *banjar* lands with *kikar*. There are very few gardens in Jalandhar, as the cultivation of the land is more profitable. However, rich *sáhkárs* and *zamíndárs* own gardens, especially in the neighbourhood of Jalandhar and Nawashahr. Near the former town there are also 12 private groves of *shisham* trees, varying from $\frac{1}{2}$ to 12 acres in area, and situated on barren sandy soil unsuitable for cultivation.

The Deputy Commissioners of Lahore and Delhi give lists of persons who planted trees.

87. Coming now to the fairly moist, or forest, districts, it is reported that no persons took any interest in arboriculture in Gujrát. In Siálkot, on the contrary, much attention was paid to tree planting. Small fruit gardens and large orchards are being planted all over the district, as a source of profit, and small groves of timber trees are seen near every village well. The cultivation of vegetables from imported seed is increasing, and applications are freely made for superior kinds of grafted or other fruit trees, which are supplied as far as possible at half prices. In Simla also great interest is taken in fruit cultivation. From Hazára it is reported that the people are very fond of planting fruit and other useful kinds of trees on their private lands, and also in burial grounds and round tanks and wells. The same is the case in Kángra proper, where nearly every hamlet has its grove of fruit and timber trees.

D.—CANAL ARBORICULTURE.

88. The following statement shows the progress made in planting up canal avenues during the three years under report as compared with that in the previous triennial period :—

1	2	3	4	5	6
Year.	Length of roads and canals suitable for avenues.	LENGTH OF ROADS AND CANALS.			
		Fully stocked with trees at the beginning of the year or period.	Planted during the year or period.	Which failed during the year or period.	Fully stocked with trees and plants at the end of the year or period.
	Miles.	Miles.	Miles.	Miles.	Miles.
1890-91 to 1892-93 }	4,467-68	2,935-21	901-77	1,232-73	2,604-25
1893-94 ...	4,595-36	2,604-25	257-78	207-08	2,654-95
1894-95 ...	4,958-33	2,654-95	187-22	52-52	2,739-65
1895-96 ...	5,047-22	2,789-65	300-02	93-77	2,995-90
1893-94 to 1895-96. }	5,047-22	2,604-25	745-02	353-37	2,995-90

It will be seen from the above that the net addition to canal avenues has amounted to 391-65 miles. After omitting the entries due to correction of previous returns, as well as those due to transfers of areas from other heads, the actual work done during the period extended over a length of 509-98 miles, and the actual failures, excluding 19-85 miles carried away by river action, were 188-94 miles; the length of avenues successfully planted up during the period thus amounts to 321-04 miles, compared with 299-92 miles in the previous period.

89. The progress in plantations may be seen from the statement given below :—

1	2	3	4	5	6
Year.	Area taken up for plantation at the beginning of the year or period.	AREA OF PLANTATIONS.			
		Successfully stocked at the beginning of the year or period.	Sown or planted during the year or period.	Which failed during the year or period.	Stocked at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93. }	24,852-87	10,942-81	8,459-98	2,918-40	16,484-39
1893-94 ...	24,458-04	16,484-39	577-71	105-72	16,956-38
1894-95 ...	24,706-22	16,956-38	371-12	130-36	17,197-14
1895-96 ...	24,784-11	17,197-14	536-15	339-33	17,393-96
1893-94 to 1895-96. }	24,784-11	16,484-39	1,484-98	575-41	17,393-96

This shows an increase of 909·57 acres. After deducting the areas due to correction of errors and transfers from other heads, the net actual increase amounts to 787·50 acres, which occurred chiefly in the Sirhind Canal, Ferozepore Division, and Chenáb Canal, 1st and 2nd Divisions.

90. The progress in nurseries is shown in the following abstract :—

1	2	3	4	5
Year.	AREA OF NURSERIES.			
	At the beginning of the year or period.	Added during the year or period.	Given up or transferred to plantations during the year or period.	Remaining at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93	48·21	105·58	87·21	66·58
1893-94	66·58	10·65	19·34	57·89
1894-95	57·89	28·15	20·41	65·63
1895-96	65·63	17·56	17·74	65·45
1893-94 to 1895-96	66·58	56·36	57·49	65·45

The area at the close of the period under report is only 1·13 less than that at the commencement.

91. The financial results of canal arboriculture will be seen from the annexed statement :—

1	2	3	4
Year.	Income.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
1887-88 to 1889-90	2,60,242	2,17,337	42,905
1890-91 to 1892-93	3,15,367	2,54,508	60,859
1893-94	1,00,106	82,675	17,431
1894-95	76,950	74,701	2,249
1895-96	82,195	80,523	1,672
1893-94 to 1895-96	2,59,251	2,37,899	21,352

It will be seen that there has been a decrease of Rs. 56,116 in revenue, of Rs. 16,609 in expenditure, and of Rs. 39,507 in surplus, compared with the previous triennial period, and that during the last two years the surplus has greatly diminished. The principal decreases of revenue occurred in the Bári Doáb Canal, viz., from Rs. 1,13,291 to Rs. 79,368, and in the Karnál Division, Western Jumna Canal. In the Bári Doáb Canal also the expenditure has decreased from Rs. 47,977 to Rs. 24,542, whilst, on the other hand, in the Chenáb Canal it has increased by Rs. 21,650, owing to the formation of new divisions.

E.—ARBORICULTURE ON PROVINCIAL ROADS.

92. The statement given below shows that the avenues on the Provincial roads were increased by 138·43 miles. Eliminating entries due to the adjustment of errors, &c., the actual work done during the period was the planting up of 201·50 miles, of which 118·94 miles failed, compared with an increase in length of 148·17 miles in the three previous years :—

1	2	3	4	5	6
YEAR.	Length of roads suitable for avenues.	LENGTH OF ROADS.			
		Fully stocked with trees at the beginning of the year or period.	Planted during the year or period.	Which failed during the year or period.	Fully stocked with trees or plants alive at the end of the year or period.
	Miles.	Miles.	Miles.	Miles.	Miles.
1890-91 to 1892-93. }	1,807·62	926·87	362·62	398·89	890·60
1893-94 ...	1,895·44	890·60	157·97	103·30	945·27
1894-95 ...	1,930·79	945·27	81·24	40·14	986·37
1895-96 ...	1,893·36	986·37	91·60	48·94	1,029·03
1893-94 to 1895-96. }	1,893·36	890·60	336·81	192·38	1,029·03

93. From the statement of groves, printed at the end of the report, it will appear that there has been an increase of 2·46 acres only.

94. The plantation in the Dera Ismail Khan Division, mentioned in paragraph 85 of the last report, has undergone a slight decrease of 1·24 acres.

95. Nurseries show a total decrease of 7·89 acres, whereas there was an increase of 5·54 in the previous triennial period

96. The following statement shows the financial results of arboriculture in the Provincial divisions during the three years under report and the figures of the previous triennial period :—

1	2	3	4	5
Year.	Revenue.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.		Rs.
Total 1890-91 to 1892-93 ...	81,137	1,38,399	...	57,262
1893-94	35,895	40,487	...	4,592
1894-95	27,022	36,960	...	9,938
1895-96	38,886	37,662	1,224	...
Total 1893-94 to 1895-96 ...	1,01,803	1,15,109	...	13,306

I have the honour to be,

Sir,

Your most obedient servant,

C. F. ELLIOTT,

Offg. Conservator of Forests, Punjab.

DISTRICT ARBORICULTURE.

MUZAFFARGARH DISTRICT.

Rainfall.—The rainfall during the last three years compared with that of the three preceding years is small, but this is due to the excessive rains of 1892-93. This is an arid district, but damage was done to the trees in the Taleri gardens and on the Rohilán-wáli roads in the Muzaffargarh tahsil by floods in the Chenáb in 1893-94 and 1894-95.

Nurseries.—In order to supply trees for the Muzaffargarh and Rohilánwáli roads, two nurseries were laid out during the last three years. Many of the trees in the Pakka Nayach nursery have been transplanted on the roads, and very few are left now. Others will be planted.

Groves.—The area planted during the last three years was 4·519, while that of failures amounted to 1·228 acres. Fruit-trees were planted in the Muzaffargarh tahsil compound and the Alipur Munsif's Court compound, covering an area of 4·519 acres. The only species that failed was *shisham*.

Avenues.—The total length of avenues on roads fully planted with trees alive at the end of 1895-96 was 119·997 miles, compared with 107·267 miles at the end of 1892-93; thus showing an increase of 12·73 miles during the last three years.

¶ The progress during the last three years was about double that of the three previous years, and is apparently due to the interest taken in arboriculture by the Local Boards of Alípur and Sanáwán, where the progress is greatest.

Income.—The total income from arboriculture during the last three years was Rs. 7,907, compared with Rs. 2,907 in the three preceding years. The increase of Rs. 5,000 was chiefly due to the larger sales of roadside trees, which fell in great numbers during the floods of 1892-93, 1893-94 and 1894-95.

Expenditure.—The total expenditure on arboriculture during the last three years was Rs. 21,222, compared with Rs. 24,951 in the three preceding years. The decrease of Rs. 3,729 was due to the reduction of establishment on gardens and in the number of bullocks for working the garden wells, &c.

Cultivation of fruit-trees.—As remarked above, fruit-trees were cultivated in the compounds of the Muzaffargarh tahsil and the Alipur Munsif's Court during the last three years. Some private landowners also have planted mango trees on their lands, adjoining the road leading from Muzaffargarh to Khangarh. No fruit-trees were distributed among villagers.

Miscellaneous.—A working plan will be prepared during the current year.

I did not take over charge of the district till after the end of the period which is now reported on, so I am unable to add any remarks based on personal knowledge of the facts reported on.

MULTAN DISTRICT.

Rainfall.—The comparative table below shows that the average rainfall during the three years under report was below that of the previous years:—

	Tahsil.	Average for three years ending 1892-93.	Average for three years ending 1895-96.
Mailsi	...	7.47	5.94
Lodhrán	...	7.03	4.35
Shujabad	...	7.22	5.99
Multan	...	9.84	10.03
Kabirwála	...	9.14	7.15

Nurseries.—A slight difference in the area of nurseries is owing to two nurseries in Tahsíl Shujabad having been carried away by river action during 1893-94 and not replaced by new ones, as young trees for transplantation to roads could easily be obtained from the *zamíndárs* of that tahsíl.

Groves.—A grove at Makhdúm Rashíd, which was omitted in the last triennial report, though its area was included in the figure of 21·38 acres, should be added to the number of groves reported during 1893-94.

Avenues.—At the close of the year 1892-93 there were 213·44 miles of roads stocked with trees. During the three years under review 57·85 miles of various roads were planted, of which 48·54 miles failed, as per detail below :—

	Miles.
Struck off in 1893-94 by corrections in the returns	21
Perished out of new operations for want of water	14
Ditto old work	13·54
Total	48·54

and 222·75 miles remained fully stocked with trees at the end of March 1896.

The new work done during the three years under report consisted of 41 miles in length on two lines, or 20½ miles on each side, of the road; 16·85 miles in length of roads represent the filling up of gaps. Instructions have been given that, in future, trees planted by the roadside shall be exclusively *kíkar* or *farásh*, as experience seems to show that in the extremely arid climate of Multan other varieties are not successful.

Financial results.—The income from arboriculture amounted to Rs. 9,673, or Rs. 1,380 more than in the previous triennial period. The increase was due to a larger produce of vegetable crops in district and municipal gardens during the three years under report than in the previous years.

The expenditure for the three years under report amounted to Rs. 38,430, against Rs. 35,414 in the previous triennial period, or Rs. 3,016 more. The increase was due to an increase in the number and salaries of *mális*, &c., entertained by the Municipal Committee, and the dearness of fodder for bullocks employed in the gardens.

Plan of operations.—A plan of operations for the next three years will be laid before the next meeting of the District Board.

Ornamental gardens.—The following gardens were maintained by the Local Bodies :—

Multan Municipal Committee.

Langeh Khan garden.

Am Khás do.

These are pleasure gardens frequented by the city people and visitors to Multan.

District Board.

I.—Shísh Mahal garden, where the Divisional Judge holds his court.

II.—District Katcherry gardens.

III.—Lodhrán Tahsíl do.

IV.—Mailsi do. do.

V.—Kabírwála do. do.

VI.—Serai Sidhu do. do.

With the exception of the District Katcherry gardens, where the trees are ornamental and no fruit-trees exist, all other gardens contain good mango, date-palm and other fruit-trees, as well as ornamental trees, which are the chief source of income credited to district and municipal funds.

In 1892-93 119 mango trees were planted in Am Khás at the place where the annual horse fair is held at Multan. They are now in good condition, and a number of them are about to bear fruit.

DERA GHAZI KHAN DISTRICT.

Rainfall.—As heretofore observed, the average rainfall is singularly variable in this district. For the past three years it has amounted to about 6·87, and this in itself retards the satisfactory development of arboriculture. The country, generally speaking, is an arid tract, with a particularly dry atmosphere and extremes of heat and cold in their respective seasons.

Nurseries.—It is regretted that the number of nurseries was reduced by two during 1895-96, the land having been planted with vegetables by mistake. This error will, however, be remedied, as these nurseries furnish the principal supply of fruit-trees and will have to be maintained in future.

The number and description of young trees distributed gratis to the public during the three years under report is given below. Landowners, who were foremost in applying for young trees, with the object of extending their old, and of establishing new, gardens along *sailāb* lands to the west of the river in the vicinity of the town, have suffered severely by erosions of the river, extensive gardens and groves of fruit-trees having been virtually carried away. They are quite disheartened, and will, it is feared, not be so eager as heretofore in applying for trees for the formation of others:—

	1893-94.	1894-95.	1895-96.
Citrus Limetta ...	100	80	85
Prunus persica ...	800	400	300
Mangifera indica ...	900	1,100	800
Melia indica ...	1,000	1,200	700
Albizzia Lebbek ...	500	700	300
Cassia Fistula ...	175	200	90
Ficus Carica ...	500	800	900
Bugainvillea ...	300	600	300
Pomelo—Shaddock ...	100	80	50
Grapes ...	1,500	1,200	1,400
Oranges—Citrus Aurantium ...	500	600	300
Phoenix dactylifera (imported) ...	2,000	1,800	...
Morus alba ...	500	700	300
Punica Granatum ...	3,000	2,000	1,500
Eugenia Jambolana ...	1,300	2,000	1,000
Bauhinia variegata ...	500	300	200
Cedrela Toona ...	300	400	100
Moringa pterygosperma (perennial-bearing, Deccan) ...	500	300	200

and a large variety of roses and other plants propagated by slips, cuttings and grafts.

Plantations.—The area under this head remains the same, viz., 1,677 acres, of which 60 acres continue under afforestation. The Khánwah plantation is being extended, and next year a fuller idea of its afforestation will be given in the report.

Groves.—The grove in the Sharif Sháh Horse Fair ground continues to gain the admiration of visitors from all parts of the country, and as the trees planted there are mostly *Dalbergia Sissoo*, there is little doubt that in time it will increase in picturesqueness, and be of great value for its timber.

Avenues.—As reported before, 114 miles of roads are suited for avenue planting, of which 28·5 miles were under trees during 1894-95. However, 6·50 were added during 1895-96, making the entire length 35 miles. This improvement is due entirely to the extension of roadside nursery planting. As it has been found by experience that *Melia indica* is of rapid growth, handsome, and of dense foliage, orders have been issued for the sowing of seeds of this species, as well of *sissoo*, for avenue planting in preference to others. The latter, however, though a slow grower, commands the highest price, owing to its superior timber. *Albizzia Lebbek* is a fast grower and gives good shade, and is also eagerly sought after by *zamíndárs*, as productive of excellent fodder for their cattle, yet it is so short-lived that it is found of little use for avenue planting.

Income.—The average income for the past three years has amounted to Rs. 856, the largest sum being realised in 1893-94. As mentioned in last report, the income is variable, but now that a tract of garden land, which was under cultivation, principally for feed of garden cattle, has been leased out, the income will presumably increase. It is also expected that the produce of the gardens and sale of roadside tree loppings, &c., will improve in value.

Expenditure.—The average for the past three years has been Rs. 6,659 a year, showing a decrease of Rs. 406. This in itself is satisfactory, considering that avenue planting has been extended and afforestation is progressing as well.

By certain other reductions in the garden expenditure, the item under this head will be very considerably reduced in the future.

DERA ISMAIL KHAN DISTRICT.

Rainfall.—The rainfall during the three years under report was as follows :—

1893-94	...	...	...	...	...	...	...	9.02
1894-95	...	...	...	...	...	...	...	13.01
1895-96	...	...	...	...	...	...	...	9.82
Average								10.62

compared with 11.09 in the preceding triennial period.

The rainfall during the three years under report has been more constant than in the three preceding years, when it fell from 12.49 in 1890-91 to 4.82 in 1891-92, and rose again to 15.97 in 1892-93.

Wells have remained at a reasonable level, but tanks and lowlying lands were dry for the greater part of the period to which the report relates. Floods from the river Indus, which usually bring a vast tract in Bhakkar and Leiah tahsils under water during the hot weather, were very low in 1893 and 1895. At some places the river did not even overflow its banks. The upper portion of the Kulachi tahsil also suffered for want of a sufficient supply of water from the hill torrents.

Nurseries.—At the close of the year 1892-93 there was a total of 10.4812 acres of nurseries, to which .25 acres were added in 1893-94, .75 in 1894-95, and .30 in 1895-96, making a total of 11.7812 acres at the close of the last mentioned year. A new nursery has been formed at Dera Ismail Khan, containing a large number of fruit-trees, and also trees suited for roadside planting. It is protected by a barbed wire fence, and is situated near the circular road where supervision can be easily exercised.

Plantations.—There are no plantations in this district, nor is the soil of the tract, where perennial water is available, suitable for plantations, as it is too stony and hard for the purpose.

Groves.—There was a total of 17.50 acres of groves at the close of the year 1892-93, from which if 4.90 acres on account of failures in the Bhakkar, Leiah and Kulachi tahsils be taken, there remains a balance of 12.60 acres at the close of the triennial period. The failure is attributed to deficient floods in the River Indus, and want of a sufficient supply of water from the hill torrents.

Avenues.—There were 44 miles under avenues at the close of the year 1892-93, and the returns show that about six miles of avenues were planted during the following three years, thus :—

	Miles.
Alive at the end of the year 1892-93	44
" " " 1893-94	47
" " " 1894-95	49.50
" " " 1895-96	49.75

There is a total length of about 100 miles suitable for avenues in this district, so when nearly 50 miles have been planted with trees, the result may be regarded as fairly satisfactory, especially in such a dry district as Dera Ismail Khan.

Trees, Municipal.—The double row of trees on the circular road at Dera Ismail Khan and Karor continues in a satisfactory condition, and the trees on the circular roads at Bhakkar and Leiah, which were a short time back not in such a flourishing state as the trees at the former two places, have now much improved, and form double rows. These trees continue to be maintained by the Municipal Board.

Supervision.—As before, the work of supervision was carried on by Tahsildárs and Náib-Tahsildárs under the Deputy Commissioner's direct control. Lala Kanhya Lal, Tahsildár of Leiah, took much interest in the work, and for this reason his transfer from the district is a loss to arboricultural operations in the future. A portion of his work in this connection was the making of a very useful garden, well stocked with fruit-trees, near the tahsil building. The practice also obtains here of sending out the head municipal gardener to inspect the work of arboriculture in the outlying tahsils, and he is remunerated for this with an allowance of Rs. 5 per mensem from District Funds.

The method of planting trees and seedlings.—This was fully described in the triennial report for the period ending 1892-93, and no change in this respect has been made in recent years. *Kikar*, *siras*, *farash* and *shisham* continue to be the favourite trees for planting on avenues. Mr. Gee, late Deputy Commissioner, while on tour in the interior of the district in 1894, noticed that many of the subordinates entrusted with tree-planting did not understand their work properly. He accordingly issued detailed instructions on the subject, which are, I believe, followed carefully in all tahsils.

Income and Expenditure.

Year.	Income.	Expenditure.	Deficit.
	Rs.	Rs.	Rs.
1893-94	295	4,915	4,620
1894-95	459	4,994	4,535
1895-96	272	4,685	4,413
Average	342	4,864	4,522
Average for three years ending 1892-93... ..	119	3,929	3,810

It will be observed that the average of the income, as well as that of the expenditure, for the three years under report, is far higher than that of the income and expenditure of the three preceding years. The expenditure of the District Board on arboriculture is no doubt very large, and during the three years under report it has gone on increasing at the rate of Rs. 935 per annum. The increase in the expenditure is, however, not incommensurate with the results shown, and it must also be remembered that the district, being almost wholly dependent upon rain for its irrigation, is not favorable to tree planting.

Fruit-trees.—The several fruit gardens at Leiah, Bhakkar and Tánk continue progressing favorably, and much improvement has taken place during the period under report in the condition of the gardens at Leiah and Bhakkar.

The trees and groves on the roads leading from Dera Ismail Khan to Bannu and Tánk are under the supervision of the Public Works Department. A grant of Rs. 35 per mensem is made for the maintenance of the roads from District Funds, Rs. 20 for the road leading to Tánk and Rs. 15 for that which leads to Bannu.

The difficulties of carrying on arboricultural operations in the *thal* were fully explained by Mr. King in his last triennial report, and until the projected canal becomes an accomplished fact, there seems little chance of tree planting being ever carried to a successful issue in the tract in question.

MONTGOMERY DISTRICT.

Rainfall.—The following table shows the rainfall of the three years under report as compared with the average :—

Year.	Actual yearly rainfall.
1893-94	9·64
1894-95	7·84
1895-96	13·36
Average	10·28
Average of previous years	10·76

The average of the three years closely equals the normal average.

Nurseries.—No areas were specially set apart for nurseries, but small plots in gardens were kept stocked with cuttings and young plants, for the purpose of replacing dead trees on roads, &c.

Groves.—The total area of groves, existing in this district at the end of the triennial period under report, was 746 acres, as in the last report.

No fresh areas were planted, or transferred from nurseries, during the three years under report.

The existing groves consist of mature trees which require no particular care. The trees planted are generally *kikar*, *ber*, *shisham* and *sharin*.

Avenues.—Avenues to the extent of one mile on the Okára and Dipálpur road in Tahsil Dipálpur were planted during 1895-96. The work done during the three years under report chiefly consisted of replacing dead trees with fresh ones, or protecting young trees from frost during the cold weather, or from heat in summer. The greater portion of the roads in this district remain unplanted, owing to bad soil and scarcity of water. White ants are very destructive here and do a great deal of damage to young plants.

Income.—The income derived from arboriculture during the years under report was as follows:—

								Rs.
In 1893-94	...	...	...	...	...	...	...	782
„ 1894-95	...	...	...	...	...	...	...	1,017
„ 1895-96	...	...	...	...	...	...	...	1,605
Total								3,404

In the previous triennial period ending 1892-93 the income from arboriculture was Rs. 3,530. The income for the period ending 1895-96 includes a sum of Rs. 835 on account of sale-proceeds of the pumping-engine. Excluding the item of Rs. 835, there was a falling off of Rs. 961 during the years under report, which is chiefly due to the very small quantity of produce available in the station gardens, owing to the scarcity of water and deficient rainfall.

Expenditure.—The expenditure incurred on arboriculture during the three years under report was as follows:—

Year.	Gardens.	Groves and avenues.	Total.
	Rs.	Rs.	Rs.
1893-94	2,178	653	2,831
1894-95	2,354	922	3,276
1895-96	4,987	862	5,849
Total	9,519	2,437	11,956

In 1895-96 Rs. 200 only were expended on the extension of avenues, the remaining expenditure of 1895-96, as well as the expenditure incurred during 1893-94 and 1894-95, represent the cost of maintenance and repairs of existing gardens, groves and avenues.

A very large increase of expenditure is noticeable under gardens in the year 1895-96, in comparison with 1894-95 and 1893-94 and the triennial period ending 1892-93, and is due to—

- (1) the annual contribution of Rs. 504, paid formerly from Provincial Funds, having been withdrawn with effect from 1st April 1895 (*vide* Punjab Government letter No. 899, dated 22nd May 1894);
- (2) the annual contribution of Rs. 252, paid from Municipal Funds, being credited to District Fund, instead of being spent directly on the garden, as was the practice heretofore;

- (3) the initial cost of purchasing bullocks to work the wells in place of the engine, which was out of order and would not work properly.

Supervision of work.—The working was generally supervised by the Deputy Commissioner, District Forest Officer and the Tahsildárs.

JHANG DISTRICT.

- *Rainfall.*—The following table shows the rainfall for each of the past three years :—

Year.	Actual.	Average.
1893-94	10.65	8.61
• 1894-95	7.04	
1895-96	14.33	



The fall is insignificant.

Nurseries.—There were three nurseries at the close of the previous triennial period with an area of 34 acres. To these were added three other nurseries, formed at Dichkot, Khuriánwála and Lyallpur, comprising an area of 6, 5 and 6 acres, respectively, in 1895-96. An area of .04 was transferred in the same year to groves, thus leaving 17.30 acres under nurseries at the end of the period under report. Nine hundred trees were removed to Kot Isa Shah road in 1895-96, and they are doing well. The principal species grown in the nurseries are *sharín*, *kíkar* and *shísham*. In 1891-92 some date-palm seeds were supplied by the Director of Land Records, and were sown at different places in the district. The plants at Shorkot are reported to be in good condition. The nurseries at head-quarters are looked after by the garden establishment.

Plantations.—The only noticeable plantation in the district is that at Sáhiwál, situated on the left bank of the River Jhelum. There are only a few *shísham* trees to be seen now in the Bela Baggar plantation, which was swept away by the river some years ago. The plantation at Sáhiwál being on very fertile soil furnishes a good supply of timber. In October next a large number of fallen trees will be sold by auction. Grass and *munj* also grow well and are a source of income. The plantation is supervised by a *chankídár*, who receives Rs. 7 per mensem from the District Funds.

Groves.—There was no alteration in the area under groves during the triennial period under report.

Fruit-trees.—In the station garden at Jhang grapes have not done well, so far. Grafted mango trees are progressing. No mango trees were destroyed by frost during the past three years, and it is hoped that several of these trees will bear fruit next year. Lemon trees have generally done well, but oranges have failed.

The following fruit-trees were planted in the station garden in 1895-96 :—

Grafted mango trees	...	...	...	...	...	40
Malta orange trees	...	...	...	...	...	45
Orange trees	...	...	...	...	...	40
Sweet lime trees	...	...	...	...	...	20
Kághzi lemon trees	...	...	...	...	...	40
Pomegranate trees	...	...	...	...	...	30
• American vine trees	...	...	...	...	...	3)
• Arabian date trees	...	...	...	...	...	12
• Gulkand rose plants	...	...	...	...	...	300

while in Chiniot some 250 fruit-trees, mangoes and limes were planted.

• The groves under the charge of Municipal Committees are in a flourishing condition.

Avenues.—1.65 mile of Kot Isa Shah road was planted with 900 trees, out of which .65 failed. The soil of the district, and especially that which is at a distance from the river, is not suited for avenues.

• In Jhang station some 1,200 young trees are being tended, of which a large number were put out last year to fill up the extensive gaps which existed.

Income.—The income under different minor heads during the last three years was as follows:—

Year.	Fund.	Ornamen- tal gardens, including crops.	Nurseries.	Planta- tions.	Groves and avenues.	Miscel- laneous.	Total.
1893-94	District Fund ... Municipal Fund ...	677 181	... ...	292 ...	118 240	... 24	1,087 445
1894-95	District Fund ... Municipal Fund ...	405 201	15 ...	378 ...	52 162	104 ...	954 363
1895-96	District Fund ... Municipal Fund ...	705 203	... ...	1,061 ...	127 291	... ...	1,893 494

The higher income during the year 1895-96, i.e., Rs. 705, is chiefly due to the sale of green wheat from the station garden.

EXPENDITURE.

Year.	By Municipal Committee.	By District Board.
1893-94	1,913	4,447
1894-95	1,518	4,097
1895-96	1,591	5,023

The increase in the expenditure incurred in 1895-96 is chiefly due to the establishment of new nurseries at Dichkot, Khuriánwála and Lyallpur.

General.—Generally speaking the district is an unfavorable one for arboriculture, though a considerable improvement may be expected after the extension of the Chenáb Canal.

The soil of the district garden is permeated with saltpetre, and the supply of fruit-trees is at present inadequate to enable any distribution to be made to *zamindárs*. Some 500 fruit-trees (grafts) were put down during the past year, and it is expected that another 500 will be planted during the current year. The irrigation of roadside trees is attended with difficulty. Where there are wells in the vicinity of the roads, the villagers generally want all the water they have for cultivation. Planting is, however, possible in the stretch of land between the Jhelum and Chenáb, known as Vichand. Nine hundred trees were put out here last year, and it is expected that another 3,000 will be planted this year; the arrangement being the payment of nine pies per tree per month to the well owner supplying the water. The road from Chíníot to Shorkot runs for the greater part through barren waste, and little can be done; but I am endeavouring to get canal water for the first few miles from Chíníot, which, if received, will render roadside avenues possible.

BANNU DISTRICT.

Rainfall.—The rainfall of the first two years under report was decidedly good. In 1895-96 it was deficient in quantity and unseasonable; the summer rains stopped early in the season, and there was no winter rain worth speaking of till the very end of January.

Nurseries.—The nursery opened during 1892-93 at Gandi Khan Khel has been made over to the Public Works Department, together with the charge of the avenue on the Bannu-Dera Ismail Khan road.

Three fresh nurseries have been established at selected useful centres. Their areas are given below:—

	Acres.
1. Mánjiwála	0.12
2. Silwan	7.34
3. Isa Khel	0.03

The total area under nurseries at the close of the present triennial period was 7.64 acres, as compared with .48 acres at the close of the preceding period.

Plantations.—The area under *shisham* forest was 1,192.66 at the end of the year 1895-96. Practically, the whole of this area has always hitherto been shown as stocked with trees, but I believe that this is a mistake, and that not more than about 500 acres are actually stocked with trees. Enquiries will be made and the correct figures given in next year's statements.

Groves.—The increase of 7·23 acres in the land under groves, over the area shown at the commencement of the three years under report, is due to corrections made as the result of special inquiries instituted in the year 1893-94.

Avenues.—It is difficult to say how much progress has been made in the three years under report, as in both the last two annual statements there are remarks to the effect that alterations have been made in the figures, in order to correct mistakes in previous years' returns. Up to 1893 much attention was given to the avenues on the important high road from Kohát to Dera Ismail Khan. These avenues have now been transferred to the Public Works Department, and the attention of district officials is being given to the extension of avenues on district roads. The following figures show the operations undertaken during the past three years :—

Year.	Planted.	Died.	Survived.
	Plants.	Plants.	Plants.
1893-94	1,550	130	1,420
1894-95	3,338	2,340	998
1895-96	3,948	460	3,488

There is an Arboricultural Sub-Committee of the Local Board in each tahsíl, but the active member is the Tahsildár.

In the cold weather of 1895-96 I found that the stock of young trees in the Government garden for distribution had fallen very low, and since then the stock has been still further diminished by giving away 200 young *jáman* trees to be planted out in the cavalry lines. The nurseries are being re-stocked and are doing well.

Income.—The steady increase in the income from ornamental gardens is satisfactory, and will, I hope, be maintained. The income from plantations is derived from that part of the *shisham* plantation which is not stocked with trees, and which is leased out to cultivators.

Under the head of "Miscellaneous" is shown the income derived from grazing leases of the district *rakhs*. I do not think that this can be right, and I propose to omit this income from future returns.

Expenditure.—The decrease in expenditure was due to a slight reduction in establishment at the time of the transfer of the avenues on the Public Works road to the Public Works Department.

SHAHPUR DISTRICT.

Rainfall.—The rainfall of the year was less than that of the previous years, and comparatively little could be done to extend the area under trees.

Nurseries.—A very small addition has been made under nurseries.

Plantations.—There are no plantations in the district.

Groves.—The area under groves has been largely increased in 1895-96. The increase has taken place on the roads from Jhāwarián to Shahpur and from Shahpur to Sahíwál, where canal irrigation has become available, since the new canal has been extended.

Shisham and *kikar* trees have been planted in *chak patri* land on both sides of the Sahíwál roads.

Avenues.—The area under avenues has increased from 486 to 526 miles during the three years under report, which is due to the main roads being gradually lined with trees. *Kikar* and other common trees have been planted there.

Income.—There has been a great decrease in the income during the last two years. There were fewer sales of fuel and timber, and no thinnings were made during the years under report.

Expenditure.—Owing to the decrease in income during the years under report, the expenditure was somewhat reduced.

HISSAR DISTRICT.

Rainfall.—In 1893-94 the rainfall was very heavy, and the season, therefore, very favorable for arboriculture, but in 1895-96 it has been very scanty. The poor rainfall of 1894-95, and also the scantiness of rain during the following year, made the season generally very unfavorable for arboriculture.

Addition of area.—The subjoined statement shows the area planted with trees during the years under report :—

Description of works.	1893-94.	1894-95.	1895-96.	Total.
Nurseries	...	...	...	...
Plantations	31.25	41.26	...	72.51
Groves	...	192.70	5.56	198.26
Avenues	...	...	...	...

72.51 acres under "plantations" have been newly planted in the Hānsi Government Bir. The details of the addition of 198.26 acres under groves is as follows :—

	Acres.
Phool garden, Hissār, transferred from Hissār Municipality to Hissār District Board	7.42
Transferred from nurseries to groves	163.24
Ditto plantations to groves	22.04
Ditto Municipal Fund to Provincial Fund	5.56
Total	198.26

Reduction of area.—The subjoined memo. shows the area given up, transferred, or which failed during the triennial period :—

Description of works.	1893-94.	1894-95.	1895-96.	Total.
Nurseries	...	163.24	...	163.24
Plantations	...	27.94	...	27.94
Groves	...	33.70	5.56	39.26
Avenues	...	...	...	...

The area of 163.24 acres under nurseries was transferred to groves under the Provincial Fund during 1894-95.

Out of an area of 27.94 acres under plantations, 22.04 acres were transferred to groves and 5.90 acres failed, owing to drought.

The details of the reduction of area under groves is as follows :—

	Acres.
Transferred to the District Board, Hissār, from the Municipal Committee of Hissār, as stated under head "Addition of area"	7.42
Church garden at Sirsa transferred from Sirsa Municipal Committee to Public Works Department	4.84
Failures	23.04
Transferred from the Municipal Fund to the Provincial Fund	5.56
Total	40.86

Nurseries.—No new nurseries were formed, and no existing ones abandoned during the period under review. The seven existing nurseries have been duly maintained. They are all in fair condition, the irrigation being effected from wells and canals.

Plantations.—There are two plantations at Hānsi Bir and Bhiwāni tahsil building. It may also be worthy of note that the Hānsi Bir plantation produces a timber crop, and is irrigated by a flow of canal water. 72.51 acres were newly planted in the Hānsi Bir

Groves.—There are altogether 17 groves in this district. No new garden or grove increased in area during the year under report. Most of the trees in the Hānsi District Board garden still need further care and attention.

Avenues.—The total length of roads planted with trees at the beginning of the year 1893-94 was 108.26 miles, and no increase or decrease has occurred during the triennial period under report. There are 29 roads on which avenues, consisting of single lines of trees, exist.

Income.—The detail of income realised during the three years under report has been given in Statement No. VI. The increase of Rs. 1,030 in the year 1894-95, as compared with the preceding year, is mainly due to Rs. 1,484 on account of sale of trees from the Kāli Dēvi nursery at Hānsī.

The income has been steadily increasing during the three years under report, and arboricultural operations now realise a handsome profit.

Expenditure.—An excess expenditure of Rs. 4,011 during 1893-94, as compared with the following year, was partly due to the following expenditure from District Funds:—

	Rs.
Digging the land of Parker garden at Hissār	308
Purchase of three pairs of bullocks for Parker garden at Hissār ...	450
Construction of Kāli Devi water-course for irrigating the Hānsi	
• District Board garden	415
• Construction of a <i>dohka</i> for roadside trees	123
Total ...	<u>1,296</u>

Owing to the Church garden at Sirsa being transferred from the Sirsa Municipality to the Public Works Department, and to a few bullocks of the District Board being sold in 1894-95, the expenditure during that year decreased. The difference between the expenditure of 1894-95 and 1895-96 is small and calls for no remarks.

FEROZEPORE DISTRICT.

The accompanying seven returns show the result of the operations of the past three years, of which the year 1895-96 deserves special notice. In this district *kikar* trees have almost everywhere been planted with success. In the Punjab the *kikar* is the most useful tree for cultivation from all points of view, and is very popular. *Shisham*, of course, is the best, but it takes a very long time before it becomes mature enough for use; hence the saying in the Punjab, "*Dāda lāve tār pōta kātē.*" (If the grandfather plants it, the grandson should cut it). On the other hand, *kikar* only requires a few years to become mature enough for several useful agricultural purposes. Therefore in this district *kikar* trees have been mostly planted, and *shisham* to a smaller extent. During 1895-96 the villagers suffered greatly from want of rain, and began selling off the trees on the banks of the inundation canals and elsewhere; consequently timber and fuel have become cheaper.

Hitherto the District Board have been selling their mature and fallen trees on the spot through the agency of the Local Boards, but it was not easy to supervise these sales everywhere in the district, and the result was not so favorable as it might have been. Seeing, therefore, that fuel and timber sold locally did not bring reasonably good profit to the District Board, a depôt was opened at Ferozepore under the guidance of Mr. E. B. Francis, the Deputy Commissioner, towards the end of the last year.

The depôt is situated on a tract of land on the Mall road, near the railway station, half way between the city and cantonments. Experiments with different foreign seeds, fodders, machinery for lifting water and threshing corn, &c., &c., are also carried on here. Mature and fallen trees are brought in from all parts of the district, whence the cost of carriage is not prohibitive. Elsewhere they have to be sold locally, but every effort is made to bring the timber and fuel to head-quarters. The results are already hopeful. During the year 12,000 cwt. of firewood have been supplied under contract to the Government Ordnance Department at 7 annas per cwt. and 200 cubic feet of *shisham* for Rs. 400. It was ascertained that timber of certain dimensions was in demand for roofing purposes. Hence, after felling mature trees, they are converted into *karries* and small beams, and carried to the depôt, where they find ready sale.

The District Board have been paying Re. 1 per cubic foot for rather inferior timber for roofing village schools and other buildings. Now, instead of buying this inferior wood, that did not last long, good beams have been supplied locally at 9 annas per cubic foot, which have proved much cheaper and more durable.

The income has increased to Rs. 11,647 against Rs. 4,224, the average of the last two years. Of course the expenditure has increased also; but it is found that as experience is gained, the expenditure is steadily reduced, and the income improves every month. For instance, to begin with, carts were hired to bring in wood, but after some time the District Board considered that it would be advantageous to make its own carts out of its own wood and keep its own bullocks. The idea was carried out with good results. When not required to cart wood, the bullocks work on the well and land, where fodder for the bullocks is grown, and small nurseries are being taken care of. This is the tract of land already alluded to, about 9 acres, quite near the Mall road.

The District Board was wise enough to take this tract of land from Government on a 20 years' lease at Rs. 2 per *ghumāo*. Of this land a little more than two acres is used as a timber and fuel depôt, and the remainder is used for agricultural and arboricultural experiments.

The expenditure under the head "Arboriculture" for the year 1895-96 has reached the unusually high figure of Rs. 12,443, as per detail below, while the average expenditure of the past two years amounts to Rs. 7,437. But the District Boards are the gainers on the whole :—

Detail of expenditure for the year 1895-96.

	Rs.
Improvements to Home's band, where fruit-trees have been planted	400
Construction of a masonry well, office, godown and expenditure on bullocks and servants' houses at the depôt...	1,200
Four carts and eight bullocks ...	500
Improvements to the garden at Moga, which tahsíl pays the highest local rate ...	400
Cost of establishment ...	1,100
Maintenance of, and improvements to, the existing groves and avenues, together with cost of cutting and sawing wood, both at the depôt and on the spot ...	8,843
Total ...	12,443

Considering, therefore, that the District Board have sunk a well and constructed buildings at the depôt, the ordinary expenditure is not much higher than the average of the past few years, while the gain during the first year comes up to Rs. 7,423.

It may be argued that the District Board have used up a great deal of wood, but whatever wood has been sold has realised a much higher price at the depôt than what used to be received from local sales, *viz.*, a few annas per tree.

When mature trees are felled, *farásh* and *sirás* are cut first, as these become useless, if left long after maturity; also such thick trees are removed as interfere with the growth of others. A *kikar* is considered to be full grown after 16 years and *shisham* after 40 years.

Whenever a tree or trees are removed, arrangements are made during the ensuing rainy season to plant new ones, and in such places the gaps are generally filled with *kikar*.

It has been found that the best and cheapest way of growing *kikar* is to dig long, narrow ditches, and sow the seed on the soft soil. The plants are then left alone until they are big enough to require thinning.

No *bhistis* are employed. The ditches above alluded to are filled with water from the inundation canals, and where the canal water cannot reach them, they have to depend on rain.

Under instructions received from the Commissioner of the Division, nurseries of *pípal* trees have been planted, which will be transplanted in encamping-grounds and other suitable places during the rainy season.

The Government plantation at Kehruwála is in a flourishing condition, for which, however, a separate report will be submitted.

The Mamdot plantation, alluded to in last year's report, has done exceedingly well, as it can be irrigated by a branch of one of the inundation canals.

In conclusion, I have only to repeat the high opinion that I have always held of the honesty and intelligence of the *darogha* in charge of all these operations. Mr. Francis, the late Deputy Commissioner, placed full reliance on this man, and he fully deserves it.

PESHAWAR DISTRICT.

Rainfall.—The statement shows the average rainfall of the past two years and the year under report. The figures are obtained from the register of rainfall, prescribed by the Financial Commissioner, Punjab.

Nurseries.—About 63 acres of land were taken up for nurseries in the Pesháwar, Mardán, Chársadda and Swábi tahsils, and 2 acres were transferred to groves.

Plantations.—As ample supplies of timber are floated down the Swát, Kábul, Bára and Indus rivers, no plantations for producing timber are necessary in this district.

• *Groves.*—As stated above, 2 acres of land under nurseries were transferred to groves in the Pesháwar, Mardán, Chársadda, and Swábi tahsils.

Avenues.—169 miles of road were planted with young trees during the three years under review, of which 8½ miles failed, and 88 miles remained fully stocked with trees at the end of March last.

The failures were due to the depredations of white ants in some parts, and an insufficient supply of water in others.

Income.—The income from district arboriculture during the three years under report was Rs. 3,933, or Rs. 1,446 in excess of the figures of the previous triennial period.

The increase is due to the sale of a large number of roadside trees.

The income in the Pesháwar Municipality under the same head was Rs. 6,488, or Rs. 2,114 less, compared with the figures of previous years. The cause of the decrease is chiefly that in 1892-93 the receipts were abnormally increased by the sum of Rs. 1,560, received from the Military Works as compensation for a portion of the Sháhi Bāgh land taken up for a military road. Also in the year under report grass was much cheaper than in previous years, and receipts consequently decreased.

Expenditure.—The expenditure on district arboriculture during the three years under report was as follows:—

	Rs.
Ornamental gardens	6,436
Avenues	27,562
Total ...	33,998

The expenditure on the maintenance of ornamental gardens was Rs. 4,570 less than in previous years, the decrease being due to reduction of establishment.

Trees of various descriptions were planted throughout the district at a cost of Rs. 27,562, or Rs. 1,539 in excess of the expenditure of preceding years.

The excess in expenditure is partly due to increased planting operations, and partly to increased cost of watering.

The detail of expenditure incurred on planting avenues, &c., is as follows:—

	Rs.
1 Jemadár at Rs. 11, for 36 months	396
3 Jemadárs „ 10 „	1,080
1 Jemadár „ 12 „	432
13 Jemadárs „ 8 „	3,744
23 Mális „ 7 „	5,796
88 „ „ 5 „	15,840
Avenue planting	102
Digging holes	72
Water-pots	36
Revenue on land taken up for nurseries	2
Carriage of plants	21
Cost of baskets, &c.	41
Total ...	27,562

The expenditure in the Pesháwar Municipality under the head of “Arboriculture” was Rs. 9,148, or Rs. 9,717 less than in the former period, the decrease being due to reduction of establishment.

General remarks.—In some irrigated parts of the district fruit-trees were planted by private persons, which are getting on well, and much care is bestowed on them. The above planting is chiefly done in the Pesháwar, Mardán and Chársadda tahsils. Experiments with *Robinia pseudo-acacia* are being made in Cherát.

KOHAT DISTRICT.

Rainfall.—The annexed table shows the rainfall for each of the past six years compared with the average fall for the past 26 years, and the rainfall registered at the outlying stations :—

Year.	1st April to 30th September.	1st October to 31st March.	Total.
KOHAT.			
1890-91	14.46	15.51	29.97
1891-92	5.52	1.21	6.73
1892-93	19.70	5.94	25.64
1893-94	14.42	5.90	19.51
1894-95	17.99	7.82	25.81
1895-96	6.91	4.37	11.28
Average for the past 26 years	11.99	6.31	18.30
HANGU.			
1893-94	30.86	5.68	36.54
1894-95	27.64	6.30	33.94
1895-96	18.46	4.69	23.15
THAL.			
1893-94	12.93	5.53	18.46
1894-95	10.64	7.40	18.04
1895-96	7.22	3.64	10.86
BANDA DAUD SHAH.			
1893-94	18.08	4.63	22.71
1894-95	22.82	7.78	30.60
1895-96	12.93	5.21	18.14
KHUSHALGARH.			
1893-94	9.99	4.39	14.38
1894-95	9.48	8.24	17.72
1895-96	3.95	3.49	7.44

It will be noticed from the foregoing table that the character of the rainfall is precarious, and it is not evenly distributed throughout the district. This is no doubt partly owing to the numerous mountain ranges by which the district is intersected. Except to the north (Hangu tahsil) and south (Chautra in the Khattak *ilāka*), the rainfall is generally small. Good rain fell in April 1893, but the rainfall of May and June 1893 was scanty, except in the Hangu tahsil. The July, August and September rains were, however, abnormal. Although the rain failed for three or four months during the year, it was favorable for arboriculture, as very few trees died during the year.

The next year (1894-95), although there was a copious rainfall in July 1894 and at the end of March 1895, was unfavorable to arboriculture. There was little or no rain from April to early in June 1894, and again from September to the end of November 1894. Rain also failed in January and February 1895, in consequence of which the water in the Toi, on which the irrigation of trees mostly depended, ran short, and the trees, especially on the Tappi Bahádar Kote road, suffered greatly, the drought killing most of them.

Again, during 1895-96 there was rain in June and July 1895, and good rain fell in August 1895; subsequently it entirely failed till the end of December 1895. Some rain fell in January, February and March 1896, but the quantity was very small. Owing to prolonged drought, water in the Toi often failed during the year.

Endeavours were, however, made to supply water to the trees by employing extra *mális*, who carried water on mules, but the plan did not work well, as sufficient water could not be obtained from places at reasonable distances; consequently the trees suffered much. It will thus be seen that the triennial period under report was not, on the whole, favorable to the extension of arboriculture.

General remarks regarding the extension of arboriculture.—This district has been classed as one of the very dry districts, and its conditions are not favorable to arboriculture.

The Khattak *ilāka* gets so little water that hardly any scheme of arboriculture can be successfully carried on there. In the Bárák Tappa of that *ilāka*, however, trees are planted by the people themselves near wells, &c., where possible. In the Hangu tahsil there is no road in charge of the District Board suitable for establishing avenues, except one mile of road near Gandiaur, which is mentioned further on. The people, however, themselves plant trees, where suitable places can be found, though, owing to the

large herds of goats possessed by every village, much damage is done and comparatively few trees arrive at maturity. Considerable damage to trees is also done by nomad Wazirs and Ghilzaïs, who visit the district in the cold weather. During the winter of 1895-96, however, owing to the rates of *tirni*, realised from Ghilzaïs, having been enhanced, the influx of these unwelcome visitors was very much restricted.

The only places where any improvements can be effected are, therefore, Kohát proper and its neighbourhood. As far as funds and water were available, endeavours were made to extend arboriculture in this part of the district, but owing to unfavorable circumstances referred to above, only small progress is apparent.

In the preceding triennial period the planting of trees in avenues had been carried out on the following five roads:—

1. Jarwánda circular road.
2. Bezadi circular road.
3. Road from tahsíl gate to meet Hangu road near the Jail.
4. Ditto ditto near Public Works Godown.
5. Ditto ditto Hangu road near Police Lines.

Since then the following additions have been made to the above list:—

1. Tappi-Bahádur Kote road.
2. Kharman-Dhoda road.
3. Sheikhan road.
4. Road from tahsíl garden to Gari Mowáz Khan.
5. Road from bridge outside cantonment gate to Hangu road.

Trees have also been planted by the District Board on roads, as below, belonging to the Public Works Department, but they have not been shown in the statements submitted with this report. These will be shown by the Public Works Department in their own returns:—

- 1 mile on Hangu road near Gandiaur.
- 4 miles on Hangu road from mile No. 4 to 8.
- 2 miles on Bannu road from Chikar Kote village to Mirozai village.

As far as funds at the disposal of District and Municipal Boards and the rainfall permitted, fair progress in arboricultural operations was made, during the triennial period under report, under the personal supervision of Mr. Johnson, Vice-President of the District Board, who was ably assisted by the Tahsildár and Náib-Tahsildár of Kohát.

Nurseries.—There are two small nurseries on the Jarwánda road, and one in the Municipal garden as before. Except a small nursery on the Samána, and a plot taken up by the Municipality for use as a nursery in the old Mess garden, no new nurseries were started, nor were any given up during the period under report. In the nursery on the Samána, seeds, imported from England, of oak, ash, beech, elm, and horse and edible chestnut were sown during 1894-95, but they were not very successful. Walnuts were also sown: about 510 plants came up, of which about 200 have been distributed amongst border tribes for transplantation.

Two maunds of *kikar* seed were also obtained from Gujrát, of which 20 seers were sown in October 1895 in seven plots of ground near Kohát as an experimental measure. They grew well, but were eaten up in winter by *makar* (a species of grasshopper). Plots of land have again been prepared, and *kikar* seeds will be sown again in a few days.

Two seers of *tún* seed were sent for from the Botanical garden at Saháranpur, and a trial was made here in the Municipal garden. The seed sown both in the ground and in pots did not germinate at all. Two thousand *tún* plants were also sent for from Lahore, but they did not do well, owing to insufficiency of water.

Plants were transplanted from the nurseries to the road avenues. The supply in nurseries was not sufficient to meet the demand, and consequently plants were obtained from private gardens at Kohát and Lahore.

The nursery at Hangu, referred to in the last triennial report, was not started. The trees in the nurseries at Kohát consist chiefly of *kachnár*, *pípal*, mulberry, *shísham*, *jáman*, walnut, &c.

Avenues.—There are altogether 13 roads on which avenues exist. These comprise an aggregate length of 10·289 miles, which are stocked with 9,112 trees. The annexed statement will show the progress made during each of the past three years in planting trees in avenues in charge of the District and Municipal Boards:—

Name of Road.	Number of trees on 31st March 1890.	Number of trees planted during 1890-91 to 1892-93.	Number of trees died during 1890-91 to 1892-93.	Number of trees remaining on 1st April 1893.	PLANTED DURING THREE YEARS, viz.—				Number of trees died during three years 1893-94 to 1895-96.	Number of trees remaining on 31st March 1896.
					1893-94.	1894-95.*	1895-96.	Total.		
Bezadi	906	1,299	428	1,777	600	80	110	790	285	2,282
Jarwānda	3,313	2,980	1,908	4,385	120	700	210	1,030	*860	4,555
Mirkhweli	...	...	...	...	140	34	10	184	170	14
Dhoda-Kharmatu road	...	...	...	...	290	600	280	1,170	185	985
Tappi Bahādar Kote road	...	...	...	...	...	1,730	...	1,730	1,706	24
Sheikhān road	...	...	...	...	...	340	138	478	28	350
Small roads within Municipal limits	...	1,318	774	544	78	135	115	328	70	802

* Includes 700 willow trees which were cut.

Owing to the unfavorable circumstances above stated, no extensive operations could be carried on during the period under report, the tree planting being confined to a few miles on some of the roads near the Kohāt station.

In 1893-94 the planting was extended to about 1·98 miles, of which 1·55 mile failed, especially on the Bezadi and Mirkhweli roads. Five hundred and three trees out of 1,220 planted during the year failed, owing to the nature of soil not being suitable for mulberry trees.

In 1894-95 4·75 miles were stocked with trees, but the trees died on 2·50 miles of the Tappi-Bahādar Kote road, the soil of which is also not suitable. 1,000 *tún* and 310 *kachnār* trees were planted on the Tappi Bahādar Kote and Sheikhān roads, all of them, except 349 plants, died; most of these plants were obtained from Lahore without any balls of earth round their roots. Arrangements have now been made to extend the area under nurseries, and it is hoped that further plantings will be successful. The soil of the Dhoda-Kharmatu road is apparently suitable for arboriculture, and the plantation on this road was carried on satisfactorily. A small road from the bridge outside the cantonment gate to the Hangu road, and the road from the tahsíl garden to Garhi Mowáz Khan, within the limits of the Kohāt Municipality, were stocked with *pípal* and *sarín* trees, and they are flourishing well.

The trees on all the roads within municipal limits are in good condition, and many of them have attained a height of over 25 feet.

In 1895-96 only 3·15 miles were stocked with trees in avenues, of which 1·65 miles failed. One mile, near Gandiaur in the Hangu Sub-Division, was stocked with young seedlings, but they died altogether for want of water. The work done in the avenues consists chiefly of filling up gaps and blanks, and the preservation of trees formerly planted. As the willow trees on the Jarwānda road were planted too near to each other, and formed a tangled jungle, it was thought advisable to cut some of them, to allow free air to the *shisham* and other trees planted lately, and consequently about 700 trees were cut down during the year 1895-96.

About 133 plants were planted on the Sheikhān road. The condition of trees planted during the year is satisfactory; 353 trees out of the total number, 863, planted during the year, died.

Many of the trees were lopped this year on the Jarwanda-Bezadi and on Municipal roads, and the timber produced was sold for only Rs. 7, the rates of fuel being low.

Taking into consideration all the unfavorable circumstances above referred to, there has been a marked improvement in planting trees in avenues. The soil is suitable for mulberry, *pípal*, *ber*, *Eucalyptus*, willow, *shisham* and *tún* trees, and these are all in good condition, except *ber*, which takes a long time to attain maturity. Many of the trees have attained a height of about 40 feet.

Four-thousand eight hundred and forty-five trees were planted on the roads mentioned above, of which 2,604, or 53·71 per cent. died, owing to continued drought, during the year 1895-96.

Method of planting.—The method of planting is the same as printed on page 18 of the triennial report for the preceding period (1890-91 to 1892-93).

Groves.—There are no groves in the district, except two small ones, and nothing has been done to increase the area under this head, as the District Board has a good deal to do in the way of planting trees on roadsides.

Ornamental garden.—There is only one public garden at Kohát, in charge of the Kohát Municipal Board, which has now greatly improved under the supervision of Mr. Johnson. It contains various kinds of fruit-trees, such as guavas, loquats, almonds, peaches, figs, mangoes, *jámans*, plaintains, oranges, pomegranates, plums and limes.

Fruit trees of various kinds, including 25 mango grafts, were sent for in large numbers, and were planted in the Municipal garden. It is expected that many of them will bear fruit next year.

The following statement shows the receipts and expenditure of the garden during the past six years :—

Year.	Receipts.	EXPENDITURE.			Deficit.	Surplus.	REMARKS.
		Pay of establish- ment.	Miscellaneous ex- penditure.	Total.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1890-91	525	436	80	516	9	...	
1891-92	342	448	188	636	294	...	
1892-93	566	572	492	1,064	498	...	
1893-94	615	612	413	1,025	410	...	
1894-95	568	619	285	864	296	...	
1895-96	875	624	245	869	...	6	

The increased expenditure during 1893-94 and 1894-95 is due to a large number of fruit-trees having been obtained from Lahore, to replace those killed by locusts, and to plant in vacant plots.

Flower and vegetable seeds, costing about Rs. 69 and Rs. 241, respectively, were sent for from England, Saháranpur and the Lahore Horticultural gardens.

It will be seen from the above statement that the garden has become a self-supporting one, and it is expected that it will shortly become a source of income to the Municipality.

Vegetables of various kinds are sown in the garden, and the system of supplying *dáls* to the garrison mess and other officers at fixed rates, introduced by Mr. Johnson, has proved a success. The increase in income under this head is due to the better arrangement and close supervision on the part of the above officer, who takes great interest in this work.

Revenue and expenditure.—The annexed statement shows the income and expenditure on account of arboriculture during each of the last three years as compared with the preceding triennial period :—

Year.	Income.	EXPENDITURE ON ARBORI- CULTURE.			REMARKS.
		Estab- lishment charges.	Miscel- laneous charges.	Total.	
	Rs.	Rs.	Rs.	Rs.	
1890-91	37	402	646	1,042	
1891-92	77	359	372	731	
1892-93	30	555	233	788	
1893-94	...	612	364	976	
1894-95	32	1,725	888	*2,613	* Includes Rs. 1,500 sanctioned by Government out of the amount collected on account of grazing dues from the trans-border tribes.
1895-96	77	1,232	549	1,781	

The income realised is on account of sale-proceeds of grass on roadsides; only Rs. 7 was realised from the lopping of trees and sale of timber. As stated in the last triennial report, no large income from lopping, &c., can be expected, as fuel is very cheap and easily procured in this district.

The following establishment was employed during each of the past three years on roads:—

Year.	Number of men employed.	Rate per mensem.	Per annum.
	DISTRICT	FUNDS.	
1893-94	{ 1 Jemadár 6 Rangers 1 Bishti... ..	Rs. 15 33 6	Rs. 180 396 72
			648
1894-95	{ 1 Jemadár 13 Rangers 1 Bishti... .. 6 Mális 2 Syces	10 65 6 51 12	120 780 72 612 144
			1,728
1895-96	{ 1 Jemadár 1 Ditto 9 Rangers 1 Bishti... .. 4 Mális 1 Syce	10 8 45 6 32 6	120 96 540 72 384 72
			1,284
	MUNICIPAL	FUNDS.	
1893-94	2 Rangers	12	144
1894-95	Ditto	12	144
1895-96	Ditto	12	144

The increase in expenditure during 1894-95 is due to the planting of a large number of trees in avenues on the Tappi-Bahádar Kote, Kharmatu-Dhoda and Sheikhan roads.

Government sanctioned a grant of Rs. 1,500 per annum from the amount realised from the Ghilzaís and other trans-border graziers for arboriculture in this district, but this sanction was subsequently cancelled on the ground that *tirni*, being land revenue, could not be appropriated for local objects of this sort without the sanction of the Government of India.

The amount of Rs. 1,500 sanctioned for 1894-95 was, however, drawn and expended. A strong representation for an allotment of Rs. 1,500 for arboriculture was again made by Major Leigh in May 1895, but no reply has yet been received to the same. The total expenditure during 1895-96 was Rs. 1,599, against Rs. 959 in the preceding year. The increase is due to the extension of arboriculture along the Kharmatu-Dhoda and Sheikhan roads. The condition of the trees planted during the year is satisfactory. The Sub-Committee appointed for the purpose of supervision did practically nothing, the work being supervised by Mr. Johnson with the assistance of the Tahsildár and Náib-Tahsildár. The long continued drought caused many failures among the new plantings. Three hundred and fifty-three trees out of 863 planted during the year under report died.

It will be seen from the above statement that, notwithstanding the *tirni* grant having been stopped, a large allotment was made for arboriculture, and the results are as satisfactory as can be expected under the unfavorable circumstances referred to in the commencement of the report.

Cultivation of fruit-trees and their distribution amongst villagers.—No attempt has hitherto been made to cultivate and distribute fruit-trees among the villagers. The people are themselves anxious to start gardens and plant fruit-trees. Much energy is being displayed by them in planting fruit-trees of different varieties, which are brought annually from Lahore and elsewhere. About 6,000 fruit-trees are reported to have been planted by the people in their gardens, &c. The private gardens are in a flourishing condition and yield a fair return.

The climate and soil of the neighbouring lands of Kohát proper, where there is plenty of water, is specially favorable to the cultivation of fruit-trees. Mr. Johnson tried Calcutta plantains in his private garden. They fruited well, and are, so far, a great success: he has distributed a large number of plants to other private gardens.

As stated in the last triennial report, the Arabian date-palm seedlings, which were distributed among the leading men and agriculturists of the district, proved mostly a failure. In a few places, however, they are doing very well, and four trees in Shahzáda Sultán Ján's garden at Báqizai fruited last year. They are about eight feet in height, and one in Mr. Johnson's garden is now in fruit.

Planting of fodder trees.—Every endeavour has been made to impress upon the people the advantages of village fuel and fodder reserves, and it is hoped that something in this direction may be accomplished eventually. Some villagers, such as Káhi in the Miránzai Valley, fully appreciated the benefit to themselves of looking after their *guzárárs*. They, however, have the advantage of being free from the nomad graziers, who do so much damage in the winter in this district,

The large majority are, however, apathetic to the last degree, and care nothing so long as their flocks and herds can eke out an existence on the present scanty grazing.

So long as the funds of the district do not permit of a good deal of assistance being given to those who would really take an interest in the matter, any work in this direction must necessarily be very uphill.

All the wood available in the vicinity of the posts on the Samána has been already cut, and each year the supply for the troops on the Samána will get dearer and dearer, as it is brought from places more and more remote. It is evident that it is necessary to plant the neighbourhood of the Samána with quick-growing trees, that can be used as fuel, and experiments with the *Robinia pseudo-Acacia* have shown that it will do excellently on the Samána. Seeds sown are in a flourishing condition. Seedlings have also been sent from the Municipal garden and planted at Mastán.

ROHTAK DISTRICT.

Rainfall.—The rainfall of the triennial period for the Sadr station is shown in Statement No. I, the figures of which have been obtained from the Arboricultural Prospect Report, and the rainfall for the outlying tahsils during the three years may be seen from the subjoined Memo.:—

Name of Tahsil.	1893-94.	1894-95.	1895-96.
Jhajjar	25·37	29·85	16·26
Sámpla	29·69	34·34	17·09
Gohána	30·97	34·99	13·73

It will be seen that during the years 1893-94 to 1895-96 the highest rainfall was during the first half year of 1893-94, and the lowest in the second half of 1895-96. The rainfall of 1895-96 was 7·44 less than the average of past years.

The annexed statement will show the rainfall during the three years as compared with the figures for the two preceding triennial periods :—

1893-94	46·71
1894-95	34·96
1895-96	12·75
	94·42

First triennial period.

1887-88	30·60
1888-89	21·00
1889-90	9·85
	61·45

Second triennial period.

1890-91	23·57
1891-92	14·86
1892-93	32·28
	70·71

It will be seen from the above that one year in each triennial period was of scanty rainfall against the other two, i.e., the rainfall of two years in each period was above, and of one year below, the average of past years.

The year 1895-96 was far from being favorable for the extension of arboriculture, still the planting was extended to six miles in this year.

Nurseries.—No additions have been made to the existing nurseries, which are five in number, viz., one at the head-quarters of outlying tahsils and two at the Sadr station, with an aggregate area of 1.93 acres. They furnish plants for filling up gaps, and also for the extension of roadside avenues. At the beginning of 1893-94 there were 1.81 acres of nurseries, to which 3.36 were added during the past three years; and the area given up, or from which plants were removed to roads, amounts to 3.24 acres. 7,459 plants were removed during the past three years to the different roads from the nurseries noted below :—

Nursery at Sámpla	...	...	...	...	...	...	3,459
Do. Jhajjar	...	...	...	...	...	...	1,500
Do. Rohtak	...	...	...	...	...	...	1,500
Do. Gohána	...	...	...	...	...	...	1,000
Total	...	...	...	...	...	...	7,459

Groves.—Nothing has been done during the period under report to extend the area under this head, as the District Board has a good deal to do in the way of planting trees in avenues on roadsides.

Avenues.—The total length of roads suitable for avenues was 461.08 at the beginning of 1895-96, of which 28 miles of the Rohtak-Delhi and 18 of Rohtak-Bhiwáni roads have been transferred to the Public Works Department during the year, leaving 415.88 in charge of the Board at the end of the year. A corresponding reduction of 27 and 9 miles, respectively, has been made in the total length of road stocked with trees at the beginning of the year.

During the past three years a total length of 14 miles of avenues has been added to the roads noted below :—

1893-94.							
Sámpla-Kharkhauda Road	...	...	...	...	...	...	4
Delhi-Sirsa Road	...	...	...	...	...	...	2
							6
1894-95.							
Sámpla-Beri Road	...	...	...	...	...	...	2
Jhajjar-Chhúchakwás Road	...	...	...	...	...	...	1
							3
1895-96.							
Sámpla-Kharkhauda Road	...	...	...	...	...	...	1
Jhajjar-Chhúchakwás Road	...	...	...	...	...	...	2
Rohtak-Kharkhauda Road	...	...	...	...	...	...	2
							5

The total length which failed during the three years is 3.50 miles, thus the length of roads fully stocked with live trees at the end of 1895-96 is 196.93.

The number of roads now in charge of the District Board, on which avenues exist, is 27, as shown in the accompanying map, against 29 in the preceding triennial period; the decrease of two is accounted for by the transfer of the Delhi-Sirsa and Rohtak-Bhiwáni roads to the Public Works Department.

The memo. subjoined shows the result of arboricultural operations during the three years :—

Year.	Trees remaining at the beginning of the year.	Trees planted during the year.	Trees died during the year.	Remaining at the close of the year.
1893-94	101,239	3,713	441	104,511
1894-95	104,511	1,939	362	106,088
1895-96	106,088	1,817	835	107,070

The total number of trees planted during the three years under report was 7,469, of which 1,638, or 21·93 per cent., failed. The figures for the three years last reported on are 16,351 planted, of which 2,654 failed. Thus the period now reported on shows a decrease of 8,882 in the number of trees planted, and of 1,016 in the number of failures. The reason why a greater number of trees died in 1895-96, compared with the failure of the two preceding years, is that high winds blew at the end of 1895-96, which did much damage to trees.

The work done in 1894-95, which shows very little progress as compared with the rainfall of that year, consisted chiefly of filling up gaps and blanks, and the preservation of trees planted in 1893-94 on six miles.

Damage to trees by cattle.—To prevent damage by cattle, young trees are protected by thorny fences and mud walls. Cattle found damaging trees are taken to the pound.

Mode of planting.—Seed is sown in nurseries, and the plants are removed when they are from three to five feet high. They are planted mostly in the spring, i.e., 15th February to end of March, and partly in rainy season, and are fenced with thorns. The plants are watered by *bhistis* every second day, till they attain a sufficient height.

Pruning and lopping.—It is carried out, whenever absolutely necessary, by *máls*, who have been supplied with all implements needed for the purpose.

Income and expenditure.—The annexed statement shows the income and expenditure on account of arboriculture during each of the last three years as compared with the preceding three years :—

Particulars.	DURING					
	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.
INCOME.						
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of plants	5	2	...	...	...	...
Loppings of trees	247	1,262	695	1,378	1,663	1,139
Miscellaneous	...	...	321	157	43	110
Total ...	252	1,264	1,016	1,535	1,706	1,249
EXPENDITURE.						
Nurseries	1,146	929	828	689	307	106
Avenues	3,910	5,052	4,838	4,647	3,447	4,490
Establishment	276	324	171	88	80	...
Total ...	5,332	6,305	5,837	5,424	3,834	4,596

The period now reported on shows an increase of Rs. 1,958 in the income and a decrease of Rs. 3,620 in the outlay, as compared with the figures of the preceding triennial period. The increase in income is due to the sale of a large number of trees which were blown over by storms, and the decrease in outlay is attributable to the fact that, when rain fell, the services of *bhistis* were dispensed with.

Establishment.—The following establishment was employed in each tahsil during the past three years for the maintenance of trees on different roads :—

Name of Tahsil.	Máls.	Bhistis.
Róhtak	8	11
Gohána	8	8
Jhajjar	9	16
Sámpla	8	7
Total ...	33	42

Date-palm.—During the course of the past three years 694 seedlings were sent from the Sadr station to the Tahsildárs of Jhajjar, Sámpla and Rohtak, as per detail below, for distribution among agriculturists and for planting at different places experimentally, but I regret to say that there has been complete failure everywhere :—

Tahsíl Jhajjar	...	...	...	...	...	...	...	479
Do. Sámpla	...	...	...	...	...	...	...	65
Do. Rohtak	...	...	...	...	...	...	...	150
Total								694

Of the total number about three-fourths have dried up and the remainder are not likely to grow to maturity. The failure is due to scanty rainfall, and also to the unsuitable soil.

Kikar seed sown in reserved portions of Birs.—About 60 *bighás* were put under *kikar* seed in the Bír Súnarwála Khurd, as reported in the report for the past triennial period, but it is a matter of much regret that there has been no result for want of rain.

LAHORE DISTRICT.

Rainfall.—The following table shows the rainfall for each tahsíl during the past three years :—

Name of Tahsíl.	1893-94.	1894-95.	1895-96.
Lahore	31·21	19·57	9·94
Kasúr	32·03	18·61	10·34
Chunián	15·66	18·73	8·25
Sharakpur	25·57	17·46	7·27

The very scanty rainfall of 1895-96 has very materially retarded the growth of young trees, and in places where moisture is very deficient the trees have suffered; otherwise the condition of the avenues of the district is reported by Tahsildárs to be satisfactory. The district arboricultural establishment was principally employed on watering and tending roadside trees.

The formation of new nurseries and planting of roadside groves of shelter-giving trees receives all the attention that is possible with the available funds.

During the past three years a total length of 40·062 miles of avenues, including 10·46 transferred to the Lahore Provincial Division, has been added to the roads of the district. The following kinds of trees are used, *viz.*, *shisham*, *farásh*, *kikar* and *tút*, *shisham* predominating.

This, however, does not include tree planting operations within municipalities.

The following is the detail of lengths added in each of the four tahsils :—

Name of Tahsíl.	1893-94 to 1895-96.	1890-91 to 1892-93.
Lahore	17·250	12·246
Kasúr	...	12·281
Chunián	5·769	7·887
Sharakpur	27·50	2·000
Total	25·769	34·414

Fruit-trees were planted by the following persons in—

Tahsíl Chunián.

Mahant Sarwar Náth, at Mula Chor.
Búta Singh, son of Sajjar, at Monjeke.

Tahsíl Lahore.

Bábu Ghulám Muhay-ud-dín of Bághbánpur.
M. Chanan Dín, of Bághbánpur.
M. Dín Muhammad, of Bághbánpur.
Muhammad Bakhsh of Bághbánpur.
Mangal Singh, of Húdiára.
Jaimal Singh, of Nathoke.
Hákím, of Sahjpál.
Iláhi Bakhsh, patwári, at Naulakha.
Muhammad Bakhsh, do.
Núr Muhammad, Kassáb, of Khawája Said.
Muhammad Bakhsh, of Niázbeg.
Nawáb Násir Ali Khan.
Diwán Narindar Náth, at Ajudhjápur.
Míran Bakhsh, at Lahore.
Natha Singh, of Bhogiwál.
Nizám Dín do.

The Sub-Overseers at Kasúr and Chunián and the Veterinary Assistants at Tahsíl Lahore and Sharakpur supervised all planting operations in addition to performing their own duties.

The following shows the establishment employed and its cost during the past three years :—

Name of Tahsíl.	ESTABLISHMENT.			Cost.		
	1893-94.	1894-95.	1895-96.	1893-94.	1894-95.	1895-96.
Lahore	10	14	14	Rs. 622	Rs. 815	Rs. 921
Kasúr	13	14	13	866	879	793
Chunián	9	10	11	444	563	605
Sharakpur	10	11	12	534	694	720
Total	42	49	50	2,266	2,951	3,049

A reference to the detailed statement of expenditure will show that out of Rs. 5,804, Rs. 5,107 and Rs. 4,014, expended during the past three years, Rs. 2,266, Rs. 2,951 and Rs. 3,049, respectively, were for establishment.

The financial results of the period under report, excluding the income and expenditure on gardens, will be found in the following statement :—

Name of Tahsíl	INCOME.			EXPENDITURE.		
	1893-94.	1894-95.	1895-96.	1893-94.	1894-95.	1895-96.
Lahore	434	272	269	Rs. 2,391	Rs. 1,259	Rs. 1,042
Kasúr	241	243	1,330	1,507	1,875	1,113
Chunián	389	179	502	661	755	748
Sharakpur	81	321	59	1,245	1,218	1,111
Total	1,145	1,015	2,160	5,804	5,107	4,014

KARNAL DISTRICT.

Rainfall.—It will be observed from this statement that, though the rainfall for the last three years has been above the average of past years, there was no rain from October to the end of the year 1895-96, and drought prevailed for a portion of the year.

Nurseries.—No new nurseries were established during the period under review; the three existing nurseries, viz., at Karnál, Pánipat and Kaithal, comprising an area of 8·53 acres, contained 7,100 young trees at the end of the year 1895-96. The number of trees supplied by these nurseries for planting on different roads in the district amounted to 3,123 during the past three years. The nurseries in question are irrigated from wells.

Groves.—There is nothing new to record in the matter of groves, the number of which is the same as existed in the previous triennial period, viz., 15. These comprise an area of 317·37 acres. The number of trees that existed in these groves at the end of the year 1892-93 amounted to 3,304, of which 720 died during the period under report, while 614 were newly planted. Thus the 15 groves contained 3,198 trees in all at the end of March 1896.

Avenues.—Avenues are being extended, as far as possible, on the principal lines of communication in the district.

The operations for the past three years were as follows :—

1893-94.					
Nil.					
1894-95.					
				<i>Miles planted.</i>	<i>Number of trees planted.</i>
Karnál-Asandh Road	...	...	...	0·37	220
1895-96.					
Karnál-Indri Road	...	...	...	2	500
Road leading to Naisang Rest-house	...	...	...	0·18	100
Do. Pánipat Sessions-house	...	...	...	0·18	100
Pánipat-Rohtak Road	...	...	...	0·18	100
Pánipat-Barsat Road	...	...	...	0·18	100
Pánipat-Nagla Road	...	...	...	0·90	50
Pánipat-Salwán Road	...	...	...	0·37	200
Pánipat-Allupur Road	...	...	...	0·18	100
Road leading from Pánipat Sessions-house to Gadiwára	...	...	...	0·18	100
Total				4·35	1,350

Besides the above, 1,653 young trees were planted on various roads to fill up gaps.

The number of trees that died during the triennial period amounts to 3,161. This includes 347 old trees sold during the period, belonging to the Indri and Thánesar Road, which has been abandoned.

Fences.—Young trees planted on roads are protected by thorns and mud walls. Besides, they are taken care of by *mílís* and *chaukidárs* appointed for the purpose. Cattle found damaging trees are impounded under the Cattle Trespass Act and sent to the nearest cattle-pound.

Lopping.—Lopping of trees is only resorted to when this is found to be absolutely necessary. Trees are usually planted out in February, and also during the rains.

The subjoined memo. exhibits the results of the arboriculture operations of the past three years :—

Year.	Trees remaining at the beginning of the year.	Trees planted during the year.	Died during the year.	Remaining at the close of the year.
1893-94	29,053	596	992	28,657
1894-95	28,657	614	910	28,361
1895-96	28,361	2,013	1,259	29,115

Income and expenditure.—The table below exhibits the income and expenditure for the past three years—

Particulars.	DURING			Total.	Surplus.	Deficit.
	1893-94.	1894-95.	1895-96.			
INCOME.						
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of fruit and vegetables ... ⁶ ...	226	253	226	705		
Sale of trees	410	2,571	1,966	4,947		
Lopping of trees	96	1	15	112		
Sale of grass	37	161	19	217		
Total	769	2,986	2,226	5,981		
EXPENDITURE.						
<i>Nurseries.</i>						
Establishment	305	290	309	904		
Cost of feed of bullocks, &c.	96	41	50	187		
Repairs to wells, huts, &c.	3	...	...	3		
Miscellaneous	84	326	232	642		
<i>Avenues.</i>						
Supervising establishment	684	684	684	2,052		
Watering charges	2,748	2,475	2,672	7,895		
Protecting charges	360	360	360	1,080		
Tools and plants	13	28	30	71		
Planting, fencing and other miscellaneous expenses.	120	20	477	617		
Total	4,413	4,224	4,814	13,451	...	7,470

Date-palm.—The result of the experiments made with the Egyptian date-palm has not been very successful. There are, however, about 70 plants, grown from seed, still alive and doing well. They have grown to a height of about 5 or 6 feet. Besides these, a few plants, obtained from the off-sets, received from Egypt in 1891, exist, and these also are in good condition.

JHELUM DISTRICT.

Rainfall.—The average rainfall in each tahsil of this district during the three years under report was as follows:—

Name of Tahsil.	1893-94.	1894-95.	1895-96.	Average.
Jhelum	50·99	42·72	19·17	37·63
Pind Dādan Khan	24·07	25·49	12·76	20·77
Chakwāl	32·31	30·64	22·18	28·37
Talagang	23·49	22·56	20·40	22·15
Total	130·86	121·41	74·51	108·93
Average	32·71	30·35	18·62	27·23

The average rainfall for the three years now reported on was greater than that of the three years last reported on, notwithstanding that the rainfall of the year 1895-96 was far below that of the two previous years.

Nurseries.—The additional area brought under nurseries during each year under report was as follows:—

	Acres.
In 1893-94	0·810
In 1894-95	1·337
In 1895-96	0·188

The large additional area brought under nurseries in 1894-95 was chiefly in gardens.

The plants raised in nurseries consisted chiefly of fruit and *shisham* trees, the former being raised from cuttings, and the latter from seed.

Groves.—There was no alteration in the area under “groves” during the three years under report.

Avenues.—During the years under report the planting on roadsides was as given below:—

Roads.	Years.	Total area newly planted.	Total area failed.
Belonging to District Board	1893-94	10·188	0·609
	1894-95	19·213	1·295
	1895-96	11·024	0·344
Belonging to Municipal Committees	1893-94	0·467	0·055
	1894-95	0·420	0·185
	1895-96	2·396	0·514

District Board.—The large increase in 1894-95 was due to extensive planting on the road from Chakwál to Modra, 1,500 trees being newly planted on this road alone, and also to the planting of 690 trees on the new road from Dina to Sheikhpur.

Municipalities.—The increase in 1895-96, as compared with the two previous years, was due to a want of seedlings in those years. By 1895-96 a number of seedlings were raised, and the short planting in the other two years was made up.

The statement given below shows the number of trees which were planted and the number that failed during each year of the period now under report:—

DISTRICT BOARD.

Name of Tahsil.	1893-94.		1894-95.		1895-96.	
	Planted.	Failed.	Planted.	Failed.	Planted.	Failed.
Jhelum	840	60	1,350	110	752	...
Pind Dádan Khán	544	4	328	13	1,092	76
Chakwál	351	61	2,009	63	339	...
Talagang	430	20	453	110	280	...
District Board Total	2,165	145	4,140	296	2,463	76

MUNICIPALITIES.

Name of Municipality.	1893-94.		1894-95.		1895-96.	
	Planted.	Failed.	Planted.	Failed.	Planted.	Failed.
Jhelum	...	...	...	...	380	80
Pind Dádan Khán	241	29	222	98	125	32
Municipal Total	241	29	222	98	505	112
GRAND TOTAL	2,406	174	4,362	394	2,968	188

The total number of trees planted during the three years under report was 9,736, of which 756, or 8 per cent., failed. The percentage of failure, as compared with that of the three years previously reported on, is exactly half.

The trees planted on roadsides in the Jhelum tahsil were obtained from the Pira Ghaib Bela and the Sheikhpur and Chak Jamál gardens; in the Pind Dádan Khan tahsil from the Choa Saidan Shah garden; in the Chakwál tahsil from small nurseries on the roadsides; and in the Talagang tahsil from nurseries near the private wells of *zamindárs*.

All trees are looked after by the general establishment, and are inspected from time to time by the Tahsildárs, and by all district officers when on tour.

The income for the years under report is detailed in the statement below :—

Year.	Gardens.	Nurseries.	Total.
	Rs.	Rs.	Rs.
1893-94	886	2,346	3,032
1894-95	1,162	2,736	3,898
1895-96	893	1,911	2,804
Total	2,741	6,993	9,734
Total income from 1890-91 to 1892-93	1,827	5,193	7,030

The above figures show an increase of Rs. 2,734 during the three years under report.

Expenditure.—The statement given below gives the details of the expenditure during the three years under report :—

Years.	Gardens.	Nurseries.	Total.
	Rs.	Rs.	Rs.
1893-94	3,401	2,675	6,076
1894-95	2,747	2,568	5,315
1895-96	2,917	3,080	5,997
Total	9,065	8,323	17,388
Total expenditure during 1890-91 to 1892-93	9,269	9,676	18,945

The above figures show a decrease of Rs. 1,557 as compared with the expenditure of the three previous years.

The following statement gives the details of the establishment maintained during the three years under report :—

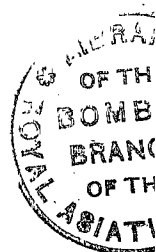
Tahsil.	GARDENS.					NURSERIES.						
	Mális on				Coolies & Bhis- tís on	Daro- gha. on	Jama- dár on	Pakháls on			Coolies & Bhis- tís on	
	Rs. 25.	Rs. 12.	Rs. 8.	Rs. 6.	Rs. 5.	Rs. 20.	Rs. 10.	Rs. 12.	Rs. 8.	Rs. 7.	Rs. 5.	
Jhelum	1	...	...	1	12	...	1	...	...	...	13	
Pind Dádan Khán	...	1	...	..	3	...	...	1	3	...	3	
Chakwál	...	...	1	...	2	1	...	...	...	4	...	
Talagang	...	...	...	...	1	...	...	...	...	2	5	
Total	1	1	1	1	18	1	1	1	3	6	21	

After deducting the total income for the three years from the expenditure for the same period, the net expenditure stands at Rs. 7,654, or an average of Rs. 2,551 per annum.

Tahsíl Gujranwála	...	...	...	...	...	91·00	miles.
Do. Wazirabad	...	...	...	...	...	30·50	"
Do. Háfizabad	...	...	...	...	...	27·49	"
Do. Khángah	...	...	...	...	...	16·00	"
				Total	...	164·99	"

The following is the detail of the roads fully stocked with trees at the close of the year 1895-96 :—

1.	Gujránwála-Rámnagar	...	...	...	...	9.25	miles.
2.	Gujránwála-Háfizabad	..	...	...	...	28.42	"
3.	Gujránwála-Siálkot	...	...	...	...	6.50	"
4.	Gujránwála-Shekhupura	...	...	...	...	15.00	"
5.	Gujránwála-Khángah	...	...	...	...	9.20	"
6.	Gujránwála-Kariál	...	...	...	...	5.00	"
7.	Gujránwála-Eminabad	...	...	...	...	9.00	"
8.	Gujránwála-Dinanagar	...	...	...	...	4.00	"
9.	Gujránwála-Vanike	...	...	...	...	7.00	"
10.	Wazirabad-Pindi Bhattián	...	...	...	...	17.00	"
11.	Dhaunkal to Grand Trunk Road	...	...	...	...	1.00	"
12.	Sohdra to Siálkot	...	...	...	...	0.50	"
13.	Wazirabad to Daska	...	...	...	...	6.00	"
14.	Manchar to Háfizabad <i>viá</i> Akálgarh	...	...	...	...	5.17	"
15.	Kalaski to Chinawán	...	...	...	...	2.46	"
16.	Ahmadanagar to Khánki	...	...	...	...	3.00	"
17.	Kalaski to Ahmadanagar	...	...	...	...	0.50	"
18.	Háfizabad to Vanike	...	...	...	...	7.00	"
19.	Háfizabad to Sukheki	...	...	...	...	2.00	"
20.	Háfizabad-Khángah	...	...	...	...	5.00	"
21.	Háfizabad-Shekhupura	...	...	...	...	1.99	"
22.	Shekhupura-Pindi Bhattián	...	...	...	...	1.00	"
23.	Háfizabad-Jalálpur	...	...	...	...	5.00	"
24.	Khángah-Shahkot	...	...	...	...	7.00	"
25.	Khángah-Ajriánwála	...	...	...	...	3.00	"
26.	Khángah-Pindi Bhattián	...	...	...	...	2.00	"
27.	Khángah-Shekhupura	...	...	...	...	2.00	"
Total						164.99	"



Thus good progress is shown in planting trees on the roads in the Khángah Dográn tahsil. In Háfizabad, as well as Khángah Dográn tahsil, the roadside trees are watered by the Chenáb Canal, but a number of *bhistis* are also employed to look after such trees as cannot be irrigated by the above canal.

In the Gujránwála and Wazirabad tahsils the trees are watered by *bhistis* only.

An establishment, consisting of four *bhistis*, is working in the Gujránwála Municipality, where several trees have been planted on the circular road. No other Municipal Committee has seriously considered the question of providing its roads with trees. The subject has, however, been put before them with a view to invite their co-operation in the matter.

Method of tree planting.—The planting of trees and seedlings in this district is carried out in the months of January and February in the cold weather, and July and August in the hot weather. Seedlings from two to four feet in height are dug up with a lump of earth attached, and then transplanted three feet apart from each other and protected by thorn fencing from cattle. In some places mud walls, about four or five feet high, are made for the purpose of protecting young trees, until they attain a sufficient height to be safe from the attacks of cattle. Some of the trees on the station roads have been provided with iron bar fencing as an experiment.

Young trees are watered every third day during the summer, and after every fifth day in winter. The species most suited to the soil of this district are *kikar*, *shisham* and *tamarisk*, but only the two former are now allowed to be cultivated.

Fruit-trees.—No fruit-trees were planted during the years under report on any roads in the district.

There are about 85 plants of Egyptian date-palms at the station garden, which seem to be in good condition, having attained a height of four to five feet; but, generally speaking, very little attention is paid to the cultivation of fruit-trees in this district, private enterprise being restricted to a few gardens here and there.

The District Board of Gujránwála maintains five gardens at present—

- One at the Sadr Station;
- One at Tahsil Gujránwála;
- One at the Sessions-house;
- One at Háfizabad;
- One at Khángah Dográn.

The garden at the Sadr station is the largest and covers an area of about 20 acres, and those at Gujránwála, the Sessions-house and Háfizabad are small ones. The garden at Khángah Dográn was planted only recently, but promises to be a success. The chief source of income is derived from the sale-proceeds of Malta oranges, which form the staple produce of the garden, and are very largely cultivated throughout the district, both by the District and Municipal Boards, and by private persons.

The gardens maintained by the Local Bodies are more or less ornamental, the income derived from the sale of fruit and vegetables being far below the expenditure incurred.

The Municipal Committee of Gujranwála maintains four gardens, two being only orchards; the principal source of income being, as already remarked, the sale-proceeds of Malta oranges.

The Municipal Committees of Wazirabad and Rámnagar also keep up small gardens, but there is little or no income derived from them.

The establishment employed for the different roads and gardens described above is as follows :—

Detail of establishment employed for the maintenance of roadside trees.

Number.	Name of Tahsíl, &c.	Establishment.	Annual expense.	REMARKS.
			Rs.	
1	Station roads ... {	1 Jamadár, at Rs. 3 per mensem 5 Bhistís, at Rs. 4-8-0 " "	36 270	
		Total ...	306	
2	Tahsíl Gujranwála ... {	1 Jamadár, at Rs. 10 per mensem 18 Bhistís, at Rs. 5 " "	120 1,080	
		Total ...	1,200	
3	Tahsíl Wazirabad ... {	1 Jamadár, at Rs. 7 per mensem 10 Bhistís, at Rs. 5 " " 2 Do. at Rs. 4 " "	84 600 96	
		Total ...	780	
4	Tahsíl Háfizabad ... {	1 Jamadár, at Rs. 10 per mensem 14 Bhistís, at Rs. 5 " "	120 840	
		Total ..	960	
5	Tahsíl Khángah Dográn ... {	1 Jamadár, at Rs. 10 per mensem 14 Bhistís, at Rs. 6 " "	120 1,008	
		Total ...	1,128	
6	New Colonies on the Chenáb Canal. {	3 Mális, at Rs. 9 per mensem ... 6 Coolies, at Rs. 7 " " ...	324 504	
		Total ...	828	

Detail of District Board's garden establishment.

Number.	Garden.	Establishment.	Annual amount.	REMARKS.
			Rs.	
1	Sadr garden ... {	1 Máli, at Rs. 12 per mensem ... 10 Coolies, at Rs. 5 " " ...	144 600	
		Total ...	744	
2	Sessions-house garden ... {	1 Máli, at 4 (share) per mensem 2 Coolies, at Rs. 5 " "	48 120	
		Total ...	168	
3	Tahsíl garden, Gujranwála {	1 Máli, at Rs. 6 per mensem ... 1 Cooli, at Rs. 4 " " ...	72 48	
		Total ...	120	
4	Tahsíl garden at Háfizabad {	1 Máli, at Rs. 7 per mensem ... 1 Máli, at Rs. 5 " " ...	84 60	
		Total ...	144	
5	Tahsíl garden at Khángah Dográn. {	1 Máli, at Rs. 10 per mensem ... 2 Coolies, at Rs. 6 " " ...	120 144	
		Total ...	264	

Financial results.—The following table shows the income and expenditure on arboriculture and gardens during the three years under report :—

Year.	Income.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
1893-94	2,002	8,505	...	6,503
1894-95	2,480	8,896	...	6,416
1895-96	2,095	8,255	...	6,160

The figures shown above are explained as follows :—

Income, 1893-94.—Out of Rs. 2,002, Rs. 1,237 were realised on account of sale-proceeds of garden produce, including Malta oranges, and Rs. 631 on account of sale-proceeds of dry trees on roadsides, and Rs. 134 are on account of fines from *bhistis* and other miscellaneous income.

1894-95.—Rs. 1,177 represent sale-proceeds of garden produce, and Rs. 1,231 sale-proceeds of roadside trees, and Rs. 72 as miscellaneous.

1895-96.—Rs. 912 were realised on account of garden produce, Rs. 15 on account of grass sold at the nurseries in the Chenáb Canal colonisation area, Rs. 1,142 on account of sale-proceeds of dry wood, and Rs. 26 on account of sale-proceeds of old and unserviceable bullocks at the station garden.

Expenditure, 1893-94.—Out of Rs. 8,505, Rs. 2,810 were spent on the maintenance of gardens, Rs. 1,746 on the maintenance of 9 nurseries in the colonization area of the Chenáb Canal, Rs. 3,117 were spent on the maintenance of roadside trees, Rs. 400 on account of planting new trees, and Rs. 432 as pay of jamadárs who supervised the work of *bhistis*.

1894-95.—During this year Rs. 2,722 were incurred on the maintenance of gardens, Rs. 878 on the maintenance of nurseries in the Chenáb colonization area, Rs. 45 on new nurseries, Rs. 3,567 on the maintenance of the roadside trees, Rs. 1,225 on planting new trees, and Rs. 459 as pay of the jamadárs who looked after the *bhistis*.

1895-96.—Out of Rs. 8,225, Rs. 2,751 were spent on the maintenance of gardens, Rs. 828 on account of colonization nurseries, Rs. 4,247 on roadside trees, and Rs. 429 on account of pay of jamadárs.

The figures cited above show that the District Boards spent large sums of money on arboriculture, while the profits in return were comparatively small.

Lála Pindi Dás, Tahsildár of Khángah Dográn, deserves much credit for the interest he has displayed in arboriculture and horticultural work.

GURGAON DISTRICT.

Rainfall.—The rainfall for the three years under report, viz., 1893-94 to 1895-96, has been good. During each of the first two years the rainfall was above the average, but in the latter year a scanty rainfall was experienced throughout the district. The total rainfall for the three years is 83.11 inches.

Nurseries.—The area under this head at the beginning of 1893-94 was 3.11 acres, but from time to time nurseries have been abandoned, no doubt owing to their being in places where they were not under good supervision, and now there is nothing to show in the way of nursery gardens. The old system of each tahsíl having its own nursery garden is after all the best arrangement, and I will re-introduce it.

Plantations.—The area taken up for plantation purposes was 2,156.343 acres, of which only 114.812 acres had been successfully stocked at the beginning of 1893-94. No further sowings were made during that year, but in the year following 13.468 acres were planted at Banjar Guraora in the Rewári tahsíl. However, the whole of this area proved a failure for want of rain, but it was given another trial in 1895-96, with no better results, due a great deal to the difficulty of supervising the watering of the plants.

Groves.—There have been no additions to this head, the area occupied at the beginning of 1893-94 was 285.39 acres.

Avenues.—The total length of roads, *bands* and distributaries planted with trees at the commencement of 1893-94 was 253·80 miles. To this a length of 6·9 miles on the Gurgáon-Ferozepore and Núh-Palwal roads was added during the year, with very poor results, a distance of three miles failing on both roads. The year following 18·14 miles were added to the following roads :—

	Miles.
1. Núh-Rewári	4·90
2. Bahora-Taoru	6·06
3. Palwal-Hattín	5·18
4. Gurgáon-Ferozepore	2·00

But, with the exception of a length of one mile, the whole of the plantings failed. In 1895-96 the Ferozepore-Núh and Ferozepore-Ulwar roads were planted for about 1·25 miles with greater success, only ·5 mile failing on each road.

Income.—The total income for the three years ending 1895-96 was Rs. 12,974. The figures of the two former years compare favorably, except for groves and avenues, where there is a decrease of Rs. 930 in 1894-95. This is due to the very large amount received the previous year for the trees and loppings of trees on the railway station road. In 1895-96 a considerable increase under ornamental gardens is due to the arrangement of hiring out the station garden bullocks, but this practice had to be discontinued, as the garden was suffering from want of water, and fruit, trees, &c., were being destroyed ; moreover, this is not a legitimate source of income, and cannot be shown under it.

Under miscellaneous an item of Rs. 50 is for fines, &c., imposed and recovered.

Expenditure.—The total expenditure for 1893-94 and 1894-95 is stationary, but a general reduction of establishment was considered necessary, and was carried out in 1895-96. The services of the Forester and Dárogah were dispensed with, and a number of *bhistís* and *málís* discharged. The loppings, which were formerly carried out by coolie labour, are now done by the *málís* in charge of the roads.

AMRITSAR DISTRICT.

Rainfall.—In 1893-94 and 1894-95 the rainfall was fair, and the result of plantings satisfactory. The year 1895-96 was, on the whole, an unfavorable one for arboriculture, owing to the failure of the summer and winter rains, and in consequence a good number of young trees perished on roadside avenues.

Avenues.—The work of the triennial period on roads is shown in the following statement :—

Year.	Length of roads fully stocked with trees at beginning of the year.	Length of roads planted during the year.	Length of roads which have failed during the year.	Length of roads fully stocked with trees at end of the year.
1893-94	167·85	14·55	11·23	171·17
1894-95	171·17	14·08	13·48	171·77
1895-96	171·77	12·82	12·08	172·51

The total mileage of roads stocked with trees was 167·85 at the beginning of the year 1893-94, and 172·51 at the close of the year 1895-96, showing an increase in mileage of 4·66 during the triennial period.

Description of work done.—The following tabular statement shows the number of trees planted, the number that died, and the number now standing :—

NAME OF ROAD.	1893-94.			1894-95.			1895-96.		
	Planted.	Died.	Remaining.	Planted.	Died.	Remaining.	Planted.	Died.	Remaining.
Filling gaps on district roads	4,095	3,240	855	4,545	3,575	970	3,550	2,978	572
Ajnála-Rámdás road, 4 miles	1,560	320	1,240	...	...	...	...	...	...
Sri-Hargobindpur road, $\frac{3}{4}$ mile	...	...	...	...	...	...	250	40	210
Jandiála-Vairowál road, $\frac{3}{4}$ mile	...	...	...	...	...	...	280	40	240

The operations of the Amritsar Municipality, besides covering the work of filling up gaps and replacing failures, included an extension to its avenues of 2·85 miles, 1·77 miles in 1893-94 and 1·08 miles in 1894-95, making the total length of roads fully stocked at the end of the triennial period ending 1895-96 51·12 miles, compared with 48·27 miles at the close of 1892-93.

Groves.—The area remains the same as in the previous years, viz., 3·37 acres.

Plantations.—There have been no additions to municipal plantations.

Nurseries.—In 1894-95 5·75 acres of *kikar* were sown broadcast along the road from Mehta to Gaggar Bhan, a distance of 4 miles, where the soil is suitable for *kikar* planting, a large proportion have sprung up to a height of over 2 feet.

Government gardens.—During the period under report the municipality maintained the well known Rámábágh gardens and the Nicholl and Aitchison parks, situated outside the city, and inside the city the Sant Singh Dháb and the Kaiseri gardens.

Cattle-trespass and lopping.—The following table shews the number of cattle impounded for injuring roadside trees and the amount of fines realized :—

Year.	Sheep and goats.	Cows and bullocks	Buffaloes.	Amount of fines.
				Rs.
1893-94 c	622	218	54	120
1894-95 c	574	228	66	126
1895-96	548	222	56	118

The lopping of trees was carried out throughout the district during the months of December, January and February.

Financial results.—The average annual income and expenditure for the three years under report was Rs. 2,412 and Rs. 7,439, respectively, against Rs. 2,035 and Rs. 7,515 in the preceding three years ; this shows an increase in the income of nearly Rs. 400 per annum, the expenditure remaining nearly the same as in the preceding triennial period.

Work done by private persons.—The interest taken by *zamíndárs* and land-holders in the development of arboriculture appear to be on the increase, and it is satisfactory to note that, in the vicinity of the Amritsar city, during the past three years, a number of fruit gardens have been planted by private persons. Besides this, the *zamíndárs* in the district have taken to planting *banjar* lands with *kikar*, which is a move in the right direction, and if they continue to show a lively interest in the same, they will, in time, be owners of valuable timber lands.

DELHI DISTRICT.

Rainfall.—The average rainfall of past years was 25·11 in the summer season from 1st April to 30th September, and 2·97 in the winter season from 1st October to 31st March. The rainfall during the three years under report was 27·70, 29·74 and 14·26, respectively, in the summer season, and 5·78, 10·48, and 1·89 in the cold weather. It was thus heavy in the second year, and scanty in the third year.

Nurseries.—The work done under nurseries is exhibited in the following table :—

Period.	AREA OF NURSERIES.			
	At beginning of period.	Added during period.	Deducted during period.	Balance.
	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93'	2·24	1·22	1·78	1·68
1893-94 to 1895-96	1·68	0·51	1·43	0·76

There were four nurseries at the beginning of the period under report, namely, at Mehrauli, Safdarjang's Tomb, Faridabad, and on the Sonapat-Bahalgarh road. The first two were transferred to groves, and the third was given up. The fourth nursery was slightly extended, and four new nurseries were formed; namely, on the Delhi-Najafgarh road, and the north branch road, Faridabad, and at Mehrauli and Safdarjang's Tomb. Thus, although the area under nurseries was less as compared with the previous period, there was an increase of one in the number of nurseries.

There are no nurseries in the Delhi Municipality. Young plants for roadside planting are obtained from private gardens.

Plantations.—The following statement shows the operations carried out in plantations :—

Year.	Areas taken up for plantations at beginning of period.	AREA OF PLANTATIONS.			
		Stocked at beginning of period.	Added during period.	Failed during period.	Balance.
<i>Municipality.</i>	Acres.	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93	938·73	938·53	0·20	...	938·73
1893-94 to 1895-96	938·73	938·73	...	...	938·73
<i>District.</i>					
1890-91 to 1892-93	998·61	578·00	167·24	133·47	611·77
1893-94 to 1895-96	1,023·15	611·77	147·49	182·87	576·39

The area of the *bela* plantation in the Delhi Municipality, as shown above, remained unaltered, and no area was planted during the period under report.

In the district 611·77 acres (column 3) were stocked at the beginning of the period; namely, the Tilauri *rakh* 581 acres, the Mehrauli plantation 17 acres, and *bands* 13·77 acres. Seeds were sown in 140 acres in the Tilauri *rakh*, and in 7·49 acres on *bands*, during the period under report, but failed in 180 acres in the *rakh*, owing to floods of the River Jumna, and in 2·87 acres on *bands*. There was thus a decrease of 35 acres in the area under plantations at the end of the period, as against an increase of 34 acres in the previous period.

There is nothing of any importance to be noted about the *bela* plantation. *Kikar* seed was sown in 140 acres in the Tilauri *rakh*, and *kikar* sowings failed in 180 acres in the *rakh* owing to river action; *kikar* seeds were sown in 7·49 acres on *bands*, but failed in 2·87 acres, owing to damage by trespassing cattle and scanty rainfall. The area under plantations in the district at the end of the period under report was as follows :—

	Acres.
1. Tilauri <i>rakh</i>	541
2. Mehrauli plantation	17
3. <i>Bands</i>	18·39
	<u>576·39</u>

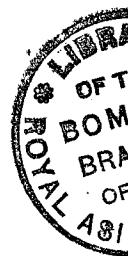
Groves.—The subjoined statement shows the progress in groves :—

Period.	AREA OF GROVES.			
	At beginning of period.	Added during the period.	Failed during the period.	Balance.
<i>Delhi Municipality.</i>	Acres.	Acres.	Acres.	Acres.
1890-91 to 1892-93	...	...	...	...
1893-94 to 1895-96	...	1·50	...	1·50
<i>District.</i>				
1890-91 to 1892-93	10·67	3·94	...	14·61
1893-94 to 1895-96	14·61	7·79	5·89	16·51

A grove of prickly pear, which has been planted by the Delhi Municipal Committee on the Ridge at Delhi, was shown in the returns during the period under report.

In the district there was a net increase of 1·90 acres. The increase is, however, really more than this, as the area that failed includes 5·57 acres on account of correction of errors in the area of groves in police rest-houses, stations and posts. The 7·79 acres added during the period include:—

	Acres.
1. Transferred from nurseries	·22
2. Groves in compounds of three schools and three dispensaries, shown for the first time	1·23
3. Six new groves at Balabgarh, Alipur, Rái, and Larsauli encamping-grounds and Mundka and Serái Rohilla Khán cart-enclosures	6·34
	<u>7·79</u>



The grove of prickly pear (1·50 acres) on the Ridge, in the Delhi Municipality, is improving, and the young trees planted within the area enclosed by the fence are growing up well.

The 86 trees (*ním*, *shísham*, &c.) planted in the Larsauli encamping-ground, and the 89 mango trees planted in the Rái encamping-ground, are in good condition, being 5 to 6 feet high.

56 trees (*ním* and *shísham*) have been planted in the Alipur encamping-ground, and 44 trees (*ním*, *shísham* and *kikar*) in the Mundka cart-enclosure. They are 2 to 3 feet high.

40 mango trees have been successfully planted in the Balabgarh encamping-ground.

One of the groves included in Statement No. IV is the Balabgarh garden. It is stocked with a number of fruit and timber trees (oranges, lemons, plums, tamarind, pomegranate, guava, *ním*, *shísham*, &c.). Its soil, however, is not favorable to the growth of mango trees. Its area is 1·40 acres, a part of which is devoted to the sowing of lucerne grass and the experimental cultivation of American corn seeds, *Sorghum saccharatum*, &c.

Avenues.—The following statement shows the progress made in avenues:—

Period.	Length of roads suitable for avenues.	LENGTH OF AVENUES.			
		Stocked at beginning of period.	Added during period.	Failed during period.	Balance.
<i>Delhi Municipality.</i>	Miles.	Miles.	Miles.	Miles.	Miles.
1890-91 to 1892-93	38·00	...	25·00	...	25·00
1893-94 to 1895-96	38·00	25·00	...	...	25·00
<i>District.</i>					
1890-91 to 1892-93	333·12	76·30	173·91	98·62	151·59
1893-94 to 1895-96	337·67	151·59	46·94	47·30	151·23

No avenues were planted in the Delhi Municipality during the period under report. In the district the net result was a decrease of ·36 mile against an increase of 75·29 miles in the previous period. The percentage of failures in the period under report is 100 against 57 in the previous one. The operations carried out during the three years are as follows:—

	Planted or sown.	Failures.
1893-94	27·35 miles.	22·94 miles.
1894-95	16·32 "	13·10 "
1895-96	3·27 "	11·26 "
	<u>46·94 "</u>	<u>47·30 "</u>

The failures in 1893-94 and 1894-95 are attributed to bad soil and floods, and those in 1895-96 to scanty rainfall. These failures are principally in the *kikar* sowings on unmetalled roads, made in the period under report, as well as in the previous period.

A number of new trees were planted in the suburban wards of the Delhi Municipality during the period under report, and are doing well. But no new avenues were planted.

The figures for the district given in Statement No. V include the figures for the Sonapat and Balabgarh Municipalities. No new work was done in the former, but the 2·31 miles of old avenues were maintained. 17 mile was planted with 40 trees in the Balabgarh Municipality during 1895-96, which are in good condition.

The operations carried out in the district are shown in the following table :—

Name of Tahsil.									Length of roads planted or sown during the period.	Failures during the period.
									Miles.	Miles.
Delhi tahsil	...	...	...	...	...	...	...	...	13·00	13·18
Sonapat tahsil	...	...	...	...	...	...	...	...	19·85	19·25
Balabgarh tahsil	...	...	...	...	...	...	...	...	13·92	14·87
Total									46·77	47·30

In the Delhi tahsil the old existing avenues on the Delhi-Najafgarh road, covering 10·25 miles, were maintained and gaps filled up. 300 trees were planted on the Pul Khalási-Azádpur road, of which 150 failed. *Kikar* seeds were sown on unmetalled roads in 1893-94 over 13 miles, but none in the two succeeding years, and 13·18 miles failed, owing to bad soil and scanty rainfall.

Out of a total length of 138·97 miles of twenty-four roads in this tahsil, 74·56 miles were stocked with trees at the commencement of the period under report, which were reduced to 74·38 miles at the end of the period.

In the Sonapat tahsil out of a total length of 87·04 miles of twelve roads, 33·06 miles were stocked with trees at the beginning of the period. 19·85 miles were planted or sown during the period, and 19·25 miles failed, leaving 33·66 miles at the close of the period. Of the old existing avenues on the Sonapat-Bahalgarrh road, 4 miles were maintained. Gaps were filled up during the period, and the avenues are in good condition, the trees being about 18 feet high. The avenue was 4·90 miles long originally, but 90 mile was destroyed, owing to bad soil and cutting of trees for crates.

The Sonapat-Murthal road had an avenue of 3·07 miles long at the beginning of the period, but it was reduced to 2·25 miles at the end, owing to flood water standing on the road for a long time. 75 trees were planted in the first year and 138 mango trees in the third year on this road.

70 mango plants were planted on the Sonapat-Jharant road in 1895-96, and a *máli* was employed for their protection. They were reported to be doing well.

Kikar seeds were sown in about 17 miles of unmetalled roads in this tahsil during the period, but failed in about 15 miles owing to floods.

In the Balabgarh tahsil *kikar* seeds were sown in 11·50 miles, and these operations failed in 13·75 miles (including the work of the previous period), mainly owing to scanty rainfall. The tree planting operations were, however, attended with better results. 896 trees were planted in gaps in the existing avenues of the Badarpur-Mehrauli road (5·50 miles), out of which 582 trees were destroyed by want of rain and porcupines. The remaining 314 trees are growing well.

The avenues on the north and south branches, Faridabad road, (2·22 miles), are doing well. Nearly 400 mango trees, besides other fruit and timber trees, are growing on these roads. 75 trees were planted on the north and south branches, Balabgarh road, in 1895-96, out of which 25 failed for want of rain. Out of a total length of 109·18 miles of eighteen roads, 43·97 miles were stocked with trees at the beginning of the period, which were reduced to 43·02 miles at the end of the triennial period.

A *chaukidár* on Rs. 5 per mensem looks after the *kíkar* seed sowing operations on unmetalled roads.

Generally speaking, the result of *kíkar* seed sowing operations along the unmetalled roads, which increased the length of roads planted during the previous period, has not been at all satisfactory during the period under report.

Cattle-trespass and lopping.—Two new cattle-pounds* were opened in the Delhi-tahsíl, two in the Balabgarh tahsíl, and three new ones in the Sonapat tahsíl, in addition to the 11 previously existing pounds. But no information is given by the Local Boards in their reports as to the extent to which young trees were damaged by cattle, and how far the *chaukidárs*, &c., employed on the different roads, exerted themselves in preventing this damage.

Lopping was carried out on the following roads:—

Delhi tahsíl.

1. Kálapahár road	...	...	...	...	} In 1894-95, cost Rs. 26-12-0.
2. Delhi-Najafgarh road	...	...	...	...	
3. Pálam-Najafgarh "	...	...	...	...	
4. Nangloi-Najafgarh "	...	...	...	...	

Sonapat tahsíl.

1. Babalgarh-Jhoondpur road.	
2. Sonapat-Bahalgarh "	
3. Sonapat-Murthal "	

Balabgarh tahsíl.

1. Balabgarh-Chausa road	...	...	...	...	} In 1893-94, cost Rs. 11-14-0.
2. Farídabad-Majhaoli "	...	...	...	...	
1. Farídabad-Majhaoli "	...	...	...	...	} In 1894-95, cost Rs. 3-1-0.
2. South branch, Farídabad road	...	...	...	...	
1. Farídabad-Atáli road	...	...	...	...	} In 1895-96, cost Rs. 35-7-0.
2. " Majhaoli road	...	...	...	...	
3. " Kirauli "	...	...	...	...	
4. Dyálpur-Mohna "	...	...	...	...	
5. Chausa "	...	...	...	...	
6. Balabgarh-Chausa "	...	...	...	...	
7. Sikri "	...	...	...	...	

Fruit and fodder trees.—No special measures were taken for growing trees suitable for furnishing cattle fodder. The *kíkar*, *pípal*, *banyan*, &c., trees, the leaves of which are eaten by cattle, grow in large numbers on the district roads.

Mango trees are growing on the Pul Khalási-Azádpur road, yielding an annual income of Rs. 8 or Rs. 9 from sale of fruit. Plum trees on the Shádipur *band* yield an annual income of about Rs. 10. 238 mango trees are growing on the Sonapat-Murthal road, and 70 mango trees on the Sonapat-Jharant road. They have not yet borne fruit. Nearly 500 mango trees are growing on the north and south branches, Balabgarh and Farídabad roads, but they have not yet borne fruit. 56 date trees are growing in the Kutab staging bungalow garden and are from 3 to 6 feet high. 18 date trees are growing in police station compound, and six in the Queen's garden, being between 9 and 10 feet high.

Financial results.—The following statement shows the financial results:—

						1893-94.	1894-95.	1895-96.
						Rs.	Rs.	Rs.
<i>Income.</i>								
District Funds	...	...	...	...	...	1,682	2,060	2,200
Sonapat Municipality	...	...	...	...	...	16	45	28
Total						1,698	2,105	2,228
<i>Expenditure.</i>								
District Funds	...	...	...	...	...	4,470	3,808	3,108
Sonapat Municipality	...	...	...	...	...	92	98	106
Balabgarh do.	...	...	...	...	...	...	...	20
Provincial Services	...	...	...	...	...	61	33	206
Total						4,623	3,939	3,440

The decrease in the expenditure is partly due to reduction of certain unnecessary establishment. The figures for the Delhi Municipality require no comment.

Development of arboriculture by private persons.—The following operations are reported under this head by the Local Boards:—

Delhi tahsil.

1. Trees planted in 2 *kacha biswás* in Poshangipur by Lekha of Poshangipur.

Sonepat tahsil.

2. Garden planted by Mutsadi Lal, son of Jogi Dás, in which guavas, pomegranates, plantains, &c., have been planted, on Sonepat-Murthal road near Sonepat.

Balabgarh tahsil.

3. Garden, area 1·6 acre, on north branch, Faridabad road, by Sheikh Abdul Ghani, Ráis of Faridabad, containing mangoes, lemons, oranges, peaches, and guavas.
4. Mango tope, area ·62 acre, at Chatarpur, by Kalwa and Píra.
5. Mango tope, area ·62 acre, at Chatarpur, by Roshan, son of Ashraf.
6. Mango tope, area 1·04 acre, at Chatarpur, by Amír, son of Sina.
7. Garden of pomegranates, &c., area 2·08 acres, at Uthakola, by Baldeo, Gujar.

A plan of operations for five years has been prepared.

Delhi Municipality.

The three Municipal gardens (the Queen's, the Kudsia, and the Roshnára) may be classed under the head of "ornamental gardens," and the Municipal *bela* plantation under head "plantations."

The income and expenditure of the three gardens and the *bela* plantation for the three years under report will be found detailed in the enclosed Statement A.

The apparently large income from the Roshnára garden during the two years 1894-95 and 1895-96 is due to the sale of old trees, cut down with the object of opening up the garden, which has been much improved during the past three years.

A *pacca* masonry wall has been built almost all round the Roshnára garden and the plots attached to it.

There is nothing of any importance to be noted about the *bela* plantation.

The income and expenditure on roadside trees will be found detailed in Statement B. A number of new trees were planted in the suburban wards during the three years under report, and are doing well.

JULLUNDUR DISTRICT.

Rainfall.—The rainfall of the years 1893-94 and 1894-95 was abundant and greatly above the average, while that of 1895-96 was scanty and much below the average.

There was no fall in September 1895, and the fall in August 1895 was slight. The winter rain was only 2·16 inches, as compared with 7·63 and 8·14 inches of the two preceding years, and 4·53, the average fall. In consequence of this scanty rainfall, the District Board had last year to entertain extra *bhistis* for watering the young trees.

Nurseries.—The area under nurseries at the commencement of the period under report was 15·66 acres, which was reduced by 6·70 acres during 1893-94 and 1894-95, in consequence of the transfer of certain plots to groves, under which head there is a corresponding increase. This was due to the trees in these nurseries having passed the stage at which they could be transplanted. There are now 12 nurseries in the district (2 in Jullundur, 2 in Nakodar, 5 in Phillour and 3 in the Nawashahr tahsil), and they are sufficient for the present requirements of the district.

20,154 young trees were given to *zamíndárs* free of cost during the past three years, and 19,019 planted on roadsides.

Last year, under the Commissioner's instructions, *pípal*, *bohar* and *kíkar* seedlings were planted, and will be transplanted on roadsides, as soon as they are ready.

Plantations.—The area at the beginning of 1893-94 was 164·0 acres, while at the end of 1895-96 it stands at 81·43 acres, or a decrease of 82·57 acres. The reason for this decrease is that the trees of three plantations, aggregating an area of 37·57 acres, were cut down and sold, as they were in danger of being washed away by the River Sutláj, and 45·0 acres of land have also been leased out for cultivation, as the trees had been cut down in previous years. All these plantations are on the banks of the Sutláj, on lowlying ground, and are liable to inundation. *Shískam* and *kíkar* are generally sown in these plantations.

Groves.—These are generally disused nurseries, or parts of nurseries, the trees of which have grown too large for transplantation. The number at the beginning of the period under report was 5, with an area of 5·31 acres; 8 were added with an area of 6·70 acres, while one at Adampur, with an area of 1·25 acres, was made over to Government. As the grove was on the encamping-ground, the trees were cut down last year, and the land was let out for cultivation along with the encamping-ground.

The area at the end of 1895-96 stands at 10·76 acres, and the number of groves at 12.

Avenues.—The work was chiefly confined to filling up gaps on old lines of road; very little new work was undertaken, except on 3·25 miles of the road from Adampur to Kartárpur *viâ* Aláwalpur. This road is 13 miles long; 9·75 miles were planted in previous years and 3·25 during 1893-95, thus completing this road. The District Board has a gang of 10 *coolies* and a *jamadár* for each of the four tahsils; and as there are some 225 miles of roads planted with trees to look after, this establishment is unable to take up new lines of road, and the Board is too badly off at present to spend more money on tree planting. During the last triennial period 19,019 trees were planted on roads by the District and Municipal Committees, of which 3,009 have died, or about 16 per cent.

Gardens.—There is only one ornamental garden in the district, at the head-quarters, called the Empress, or Town Hall, Garden. It covers an area of little more than 11 acres, and is maintained jointly by the Municipal and District Boards. A part is laid out with grass, the remainder planted with fruit trees, such as Malta and country oranges and grafted mangoes, and vegetables are also sown. Its income and expenditure will be discussed under another head.

There are four other small gardens in the district as follows:—

- (1). The Naráin Garden, Jullundur. This is a small garden in the tahsíl compound, and is also maintained jointly by the District and Municipal Committees.
- (2). The Nawashahr Báradari Garden. This is an old *nazúl* garden near the tahsíl building, and is kept up by the District Board.
- (3). Phillour Municipal Committee Garden. This is a small garden at the Committee house, and is maintained by the Municipal Committee. It is on lease.
- (4). Nakodar Municipal Garden. This is a long strip of land on the side of the Malsián road, planted with a few fruit trees.

Cattle trespass and lopping.—Earthen *gamlás*, or cactus hedges, are provided for the protection of young trees, and gangs of *coolies* are employed in each tahsíl for the purpose of looking after the trees, planting and watering them; cattle found injuring trees, or grazing on the roadside grass, are impounded, and occasionally suits for damages are also instituted. During the period under report 2,369 cattle were impounded and 18 suits instituted; nevertheless damage is constantly done by shepherds and villagers.

Lopping is done every year in the cold weather. Rs. 566 were realized during the past three years after paying the expenses of extra *coolies*.

Financial results.—The following statement shows the income and expenditure during the past three years under different heads:—

Head.	INCOME.				EXPENDITURE.				Surplus.	Deficit.
	1893-94.	1894-95.	1895-96.	Total.	1893-94.	1894-95.	1895-96.	Total.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Gardens.</i>										
Jullundur Town Hall	450	427	362	1,239	1,839	1,340	1,480	4,659	...	3,420
Naráin ..	36	38	54	128	350	320	396	1,066	...	938
Nawashahr Báradari	293	236	248	777	250	316	296	862	...	85
Phillour Municipal	30	30	30	90	...	...	...	...	90	...
Nakodar do. ...	74	8	8	90	61	49	48	158	...	68
Total Gardens ...	883	739	702	2,324	2,500	2,025	2,220	6,745	...	4,421
Nurseries ...	898	334	474	1,706	1,083	1,281	1,169	3,533	...	1,827
Plantations...	135	616	4,218	4,969	...	80	60	140	4,829	...
Groves and Avenues	8,606	4,522	4,929	18,057	4,056	3,687	3,848	11,591	6,466	...
Miscellaneous ...	163	138	72	373	...	...	...	...	373	...
Total ...	10,685	6,349	10,395	27,429	7,639	7,073	7,297	22,009	5,420	...

Gardens:—Jullundur Town Hall.—The income during 1895-96 was less than that of the two previous years, and this is due to less income from sale of grass and vegetables, on account of scarcity of rain. The larger expenditure in 1893-94 is due to an outlay of Rs. 230 on repairs to garden buildings, while in 1894-95 no repairs were done, and, moreover, the establishment was reduced by Rs. 8 per mensem. In 1895-96 Rs. 212 were spent on repairs to buildings. The garden was at one time, I am told, in excellent order, but a *mālī* was in charge for several years up to last October, who allowed it to go to ruin. The garden is now under better management. I do not think it can ever be expected to pay, as it is mainly an ornamental garden; but, at the same time, I think that better management should lead to an increase in the receipts. Fruit trees should be planted in spare plots, as these require very little care, and bring in a good income. Some money might also be made by letting out, or selling, good palms and plants in pots. It is a waste of money to grow vegetables, which do not sell for what they cost to cultivate.

Narain Garden.—This is a useless garden, which has cost Rs. 938 in the past three years, and has only brought in Rs. 128. I see no way of improving the receipts, and as the garden serves no special purpose, except to embellish the tahsil precincts, the establishment should be reduced.

Nawashahr Bāradari.—The larger income in 1893-94, as compared with 1894-95 and 1895-96, is on account of the credit in that year of an item of Rs. 46, sale-proceeds of old trees, while the increase in expenditure during 1894-95 and 1895-96, compared with 1893-94, is on account of special repairs to buildings and the well, amounting to Rs. 66 in 1894-95, and to the purchase of a pair of bullocks for Rs. 60 in 1895-96. The garden almost pays its own way.

Phillour Garden.—This is on lease, and there is no expenditure on it, the net income being Rs. 30 per annum.

Nakodar Garden.—The larger income in 1893-94, compared with the two following years, is on account of the sale of bullocks for Rs. 43-8, and the realization of Rs. 25-8, arrears of the previous year. The expenditure, Rs. 48, is on account of pay of a *mālī* at Rs. 4 per mensem. I think some better arrangement might perhaps be made for this garden. I shall also see what can be done with regard to the Narain garden. I have already given a great deal of attention to the Empress garden.

The total income of the gardens during the past three years was Rs. 2,324, and the expenditure Rs. 6,745, or a deficit of Rs. 4,421.

Nurseries.—The income shown is chiefly from sale of vegetables and fruit from the Jullundur nursery, which is 11·3 acres in area, 2·2 acres being under nursery, and the remainder planted with fruit trees and sown with vegetables.

As I have noted above, it is a very bad and useless policy to grow vegetables, as they are only grown at a serious loss. I have now leased out most of the nursery garden, only retaining a small but sufficient area for the nursery, and my estimate shows that the nursery garden, as a whole, will pay its own way in future. This will be a considerable saving to the District Board. The larger income, viz., Rs. 898, in 1893-94, shown in the above table under nurseries, as compared with the two following years, is due to the credit of Rs. 626 on account of the sale of the land of the two nurseries at Mahatpur and Malsian. There is not much variation in expenditure.

Plantations.—The very large increase in income during 1895-96, as compared with the two previous years, is on account of the sale of the trees of the plantation at Punian for Rs. 4,510, of which Rs. 4,130 were realized during the year.

Groves and Avenues.—The larger income during 1893-94, as compared with the two following years, is due to an extraordinary item of income, amounting to Rs. 2,307, from sale of trees blown down by storms in that year.

There is not much variation in expenditure. The establishment for roadside arboriculture consists of—

1 Jamadār on Rs. 15 per mensem;

3 Jamadārs on Rs. 8 each = Rs. 24 per mensem;

40 Coolies on Rs. 5 each = Rs. 200;

or a monthly expenditure of Rs. 239, and a yearly expenditure of Rs. 2,868.

The total income under all heads of arboriculture during the past three years was Rs. 27,429, and the expenditure Rs. 22,009, showing a surplus of Rs. 5,420, or Rs. 1,807 per annum.

Work done by private agency.—The people of this district, on the whole, have very few gardens, as the cultivation of land is more profitable, but some rich *sáhuakárs* and *zamíndárs* have gardens. At Jullundur and Nawashahr there are more gardens than in any other part of the district, and round about the former town there are 12 private groves of *shisham* trees, as detailed below. These are all on barren, sandy soil, which is almost unfit for cultivation, and it is consequently profitable to plant *shisham*, which grows very well on this kind of soil.

Locality.	Name of owner.	Area.
		Acre.
On Kapurthala road at Basti Babakhel ...	Abdullah Khan	4.75
Ditto ditto ...	Ditto	8.40
Grand Trunk Road to Kartárpur ...	Mián Fazal Karim Khan, Vice-President, Municipal Committee.	2.62
Ditto	Ditto ditto ditto ...	0.80
Ditto	Kallu and others, Majawars	0.92
Basti Sheikh road	Ata Muhammad	1.41
Nakodar Road	Bahádar Ali	1.77
Ditto	Ditto	1.28
Ditto	Ditto	4.19
Ditto	Ahmad Bakhsh	0.66
Ditto	Malkans	0.53
Road to cantonments	Kanwar Suchet Singh	12.90

Cultivation of fruit trees.—The principal fruit tree in this district is the mango, as the soil of Jullundur is very favourable to its culture. Mulberry, *jáman*, oranges, figs, *bér* (plum) are also grown.

LUDHIANA DISTRICT.

Rainfall.—The fluctuations of rainfall have been very marked during the period under report. In 1893-94 it was 29.2 inches, or very near the average of the past years, viz., 26.6 inches. In 1894-95 it was rather excessive, as it went up to 38.54 inches, but the year 1895-96 was one of scanty rainfall.

Nurseries.—The area under nurseries has been steadily falling. From 5.41 acres, at the beginning of 1893-94, it was reduced to 3.71 at the end of 1894-95, while at the end of 1895-96 it has sunk to 1.95. There is only one nursery now at Mansuran, all the others having been exhausted, as during the last two years 20 miles of road have been planted with single lines of trees, which are thriving well. Efforts will now be made to have more nurseries planted at suitable places in the district, as there are still about 30 miles of road which require planting with trees. Young fruit trees were sold last year for Rs. 30, but none were given *gratis*.

Plantations.—There are no plantations, properly so called, in the district. It was remarked in the report for the last triennial period, that under the new scheme the grove known as the Ludhiána *rakh* will be partially treated as a plantation, but not wholly so. Nothing, however, has as yet been done in that respect. The *rakh* was originally a nursery for *shisham* trees; although many trees were transplanted to form roadside avenues, still a very large number were left to grow *in situ*, and have, therefore, according to the classification adopted, been returned as groves.

Groves.—The area under groves at the beginning of the period under report was 352.59 acres as per detail below—

Ludhiána <i>rakh</i>	178.62 acres.
Groves on Kálka road	173.97 „

One acre was added to the area under groves during 1894-95 on the Samrála-Ludhiána road. The addition of 108.06 acres to groves during 1895-96 does not represent any areas actually planted with trees during the period under review. The fact is that in the previous report the topes of trees on encamping-grounds, and groups round saráis, Thánás, Police rest-houses, &c., were not included under this description at all; but particular care has been taken this year to have all of them included now. The area under groves at the end of the triennial period under report is 461.65 acres. The Bhat-tián grove, which is 197 acres in area, is under the control of the Forest Department.

Avenues.—In 1893-94 1·12 miles of road were planted with single lines of trees on either side in the Samrála tahsíl. The total number of young trees thus put out was 613. 1,837 young trees were also planted in place of dried ones and to fill up gaps. In 1894-95 10·25 miles of road were planted as follows :—

	miles.
Ludhiána-Lalton road	4
Kohára-Sanehwál „	3
Dehlon-Pakhówál „	1
Sidhwan-Jagráon „	$\frac{1}{2}$
Samrála-Behlolpur „	$1\frac{3}{4}$

and altogether 4,675 trees were put in.

In 1895-96 9·75 miles more of road have been planted on either side as follows :—

	Miles.
Ludhiána-Lalton road	4
Jagráon-Ráikot „	3
Kheri-Samrála „	1
Samrála-Behlolpur „	1
Khanna-Kheri „	$\frac{3}{4}$

The total number of trees thus planted last year was 2,833, while 2,095 were planted to fill up existing gaps.

The trees so planted are mostly *shisham*, but during the past two years experiments have been made with mangoes ; also experience has shown that the land about Samrála is well fitted for mangoes. Accordingly, over 200 young trees were planted in 1894-95 on the Samrála-Behlolpur road, while in 1895-96 about 300 have been planted on the Samrála-Kheri, and about as many on the Khanna-Kheri, road.

All, except half-a-dozen trees which have died, are doing well.

No attempt worth the name has yet been made to plant *kikar*, but this tree grows plentifully in this district, and is of spontaneous growth, and attains to very large proportions. The wood is very serviceable to the *zamíndárs*. Under instructions from the Commissioner of Jullundur, efforts are being made to plant the remaining lengths of roads with *kikar* seed during the rains, merely by ploughing. It has not been considered necessary to sow the seed in nurseries in the first instance, and then to transplant the young trees.

It remains to notice that, in the return submitted for the year 1894-95, 149·61 miles were shown as the length of roads fully stocked with trees. This was wrong, the correct figures being 121·5. The necessary correction has been made in Return No V, annexed to this report, as directed in footnote (c).

The lengths herein shown are those of *kacha* roads only, which are under the charge of the District Board, but there are besides 66½ miles of *pakka* road, which is under the charge of the Public Works Department.

Gardens.—There is no ornamental garden, properly so called, in the district. But a portion of the *rakh* is used as a flower garden. There has been no income from this source.

There are, besides, the following fruit gardens in the district :—

Station garden, Ludhiána.
Bassián rest-house garden.
Jagráon tahsíl garden.
Samrála ditto

Income.—The income from these gardens has risen from Rs. 250 in 1893-94 to Rs. 1,584 in 1895-96, and there is every prospect of the income from this source increasing still further. No doubt the Bassián garden has been transferred from the District Board to the Canal Department, and so some loss will be occasioned thereby, but it is hoped that this loss will be more than balanced by the improvements which have been effected in the Jagráon and Samrála tahsíl gardens, especially in the former, which has just begun to yield valuable mango fruits.

The income under the head nurseries, shown for the years 1893-94 and 1894-95, is from the sale of loppings and fellings from the *rakh* and the gardens mentioned above, but this was wrong, and so this year, 1895-96, this column has been kept blank, and the income so derived has been credited to its proper head. The income from groves and avenues was very large in 1895-96, viz., Rs. 17,208. This is due to the fact that in that year great attention was paid towards the removal of dry and useless trees on the *pakka* roads ; although they have been transferred to Public Works Department, the income from the trees standing on them is credited to the District Board.

Besides, the introduction of the Siálkot rules of sale of roadside trees has helped a great deal to control the income from this source.

The cause of the decrease of income under this head in 1894-95 is, that no income was derived in that year from sale of trees on roads which were made over to the Public Works Department, while in 1895-96 Rs. 8,677 were received from Public Works Department for sale of trees on the Ludhiána-Samrála road.

Expenditure.—The following gives details of arboricultural establishment for the whole district for each year under report:—

For 1893-94.

2 Jamadárs	@	Rs. 10 and 8	= Rs. 18 per mensem.
4 Málís	@	" 6	= " 24 " "
7 " "	@	" 5	= " 35 " "
55 Bhistís	@	" 4	= " 220 " "
1 pair of bullocks	@	" 12	= " 12 " "

For 1894-95.

2 Jamadárs	@	Rs. 10 and 8	= Rs. 18 per mensem.	From 1st April to 15th July 1894.
3 Málís	@	" 6	= " 18 " "	
6 " "	@	" 5	= " 30 " "	
52 Bhistís	@	" 4	= " 208 " "	
1 pair of bullocks	@	" 12	= " 12 " "	From 16th July 1894 to 14th January 1895.
3 Málís	@	" 6	= " 18 " "	
6 " "	@	" 5	= " 30 " "	
49 Bhistís	@	" 4	= " 196 " "	
2 Málís	@	" 6	= " 12 " "	From 15th January to 31st March 1895.
5 " "	@	" 5	= " 25 " "	
1 Málí	@	" 4	= " 4 " "	
44 Bhistís	@	" 4	= " 176 " "	

For 1895-96.

2 Málís	@	Rs. 6	= Rs. 12 per mensem.	From 1st April to 30th June 1895.
5 " "	@	" 5	= " 25 " "	
1 Málí	@	" 4	= " 4 " "	
44 Bhistís	@	" 4	= " 176 " "	
2 Málís	@	" 6	= " 12 " "	From July to October 1895.
5 " "	@	" 5	= " 25 " "	
1 Málí	@	" 4	= " 4 " "	
48 Bhistís	@	" 4	= " 192 " "	
1 Málí	@	" 7	= " 7 " "	From November 1895 to 31st March 1896.
1 " "	@	" 6	= " 6 " "	
6 Málís	@	" 5	= " 30 " "	
48 Bhistís	@	" 4	= " 192 " "	

The following table shows the establishment on the various gardens for the three years under report:—

For 1893-94 and 1894-95.

Fruit garden at Sadr—

4 Beldárs	@	Rs. 5	= Rs. 20 per mensem.
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For 1895-96.

1 Málí	@	Rs. 15	= Rs. 15 per mensem.
4 Beldárs	@	" 5	= " 20 " "

For 1893-94 and 1894-95.

Nursery at Sadr—

1 Málí	@	Rs. 15	= Rs. 15 per mensem.
1 " "	@	" 7	= " 7 " "
5 Beldárs	@	" 5	= " 25 " "
1 Beldár	@	" 4	= " 4 " "

For 1895-96.

Only one nursery exists at Mansuran for which no establishment is entertained.

For 1893-94 and 1894-95.

Flower garden at Sadr—

1 Málí	@	Rs. 15	= Rs. 15 per mensem.
2 Beldárs	@	" 5	= " 10 " "
1 Beldár	@	" 4	= " 4 " "

For 1895-96.

1 Máli	@	Rs. 15	=	Rs. 15	per mensem.	} From April to October 1895.
2 Beldárs	@	" 5	=	" 10	" "	
1 Beldár	@	" 4	=	" 4	" "	
1 Máli	@	" 15	=	" 15	" "	} From November 1895 to 31st March 1896.
3 Beldárs	@	" 5	=	" 15	" "	
1 Beldár	@	" 4	=	" 4	" "	

For 1893-94, 1894-95 and 1895-96.

1 Forester	@	Rs. 7 and 10.	per mensem.
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Tahsíl garden at Jagraon—

1 Máli	@	Rs. 6	=	Rs. 6	per mensem.
2 Beldárs	@	" 5	=	" 10	" "

Bassian garden—

1 Máli	@	Rs. 10	=	Rs. 10	" "
1 Chaukidár	@	" 5	=	" 5	" "
5 Beldárs	@	" 4	=	" 20	" "

For 1893-94 and 1894-95.

Tahsíl garden at Samrála—

1 Máli	@	Rs. 7	=	Rs. 7	per mensem.
5 Beldárs	@	" 4	=	" 20	" "

For 1895-96.

1 Máli	@	Rs. 7	=	Rs. 7	per mensem.	} From April to August 1895.
5 Beldárs	@	" 4	=	" 20	" "	
1 Máli	@	" 7	=	" 7	" "	} From September 1895 to March 1896.
4 Beldárs	@	" 4	=	" 16	" "	

RAWALPINDI DISTRICT.

Rainfall.—It will be seen from Statement No. I that, of the three years under report, the year 1893-94 shows by far the heaviest rainfall, while the past year was a conspicuously dry one:

The average for the three years is 39·67.

Nurseries.—The area set apart for nurseries is 21·76 acres, of which 14·21 acres were stocked by the District Board, and 1·68 acres by Municipalities.

Groves.—The area set apart for groves in this district is 395·58 acres, of which 359·95 acres were stocked by the District Board, and 20·21 acres by Municipalities.

Avenues.—There are 987·97 miles of roads suitable for avenues, of which 325·33 miles have been stocked by the District Board, and 10·43 miles by Municipalities.

Income.—The total income from all sources during the three years was :—

							Rs.
District Board	...	...	...	...	...	...	13,155
Municipalities	...	...	...	...	...	...	6,033
Total	...	...	...	...	...	...	19,188

The District Board income shows an improvement of Rs. 3,520 on the previous three years' figures, due principally to careful management of the park and the gardens at Hasan Abdál and Chattar.

The income of Municipalities also shows an increase of some Rs. 1,900, the whole of which nearly is claimed by the Ráwalpindi Municipality :—

							Rs.
From trees	...	...	...	...	...	...	1,100
" garden	...	...	...	...	...	...	800

Expenditure.—The total expenditure for the period under report was :—

							Rs.
District Board	...	...	...	...	...	...	5,299
Municipalities	...	...	...	...	...	...	9,492
Total	...	...	...	...	...	...	14,791

Both of the above totals show an appreciable reduction on the figures of the previous three years, due mainly to reduction in unnecessary establishment and closer supervision.

Gardens.—The six public gardens at Ráwalpindi, Chatta, Hasan Abdál, Fateh-jang, Pindigheb and Gujar Khan continue to be maintained for the propagation of fruit trees and flowers, and large supplies of young fruit and flower trees are annually distributed from nurseries to *zamindárs* and others in the district. In addition to the Government nurseries at Chatta and Hasan Abdál, the Board maintains a nursery at Cherra-pani (Lambli), 10 miles from Murree, from which young fruit and flower trees are liberally distributed *gratis*. This nursery has lately been increased by the acquisition of some 3 acres of land, and has been partly laid out as an orchard, from which good results are expected to follow in the course of another three or four years.

General remarks.—I am unable to report any progress in arboricultural work for the period under report, as the weather has, as a rule, been quite detrimental to any attempt at extensive tree-planting, especially during the whole of last year and the early part of this year, but while operations have not been extended, it will be observed that income has increased and expenditure fallen.

GUJRAT DISTRICT.

Rainfall.—The total rainfall of the period under report was less than that of the past by 15 inches. The years 1893-94 and 1894-95 were favorable to arboriculture operations, while the year 1895-96 was not so, owing to scanty rainfall. The heavy rains of 1893 and the storms of 1894 caused much injury to existing avenues.

Nurseries.—The area under nurseries at the end of the past three years was 3·051 acres. To this area 2·984 acres were added in the triennial period under report; while 3·8205 acres were given up, owing to a large number of trees having been planted on roadsides. Special attention was paid to the formation of nurseries near roads, which are maintained by small payments to *zamindárs*. A large nursery is maintained at the sadr station on District Board land, and is well looked after. It is well stocked with *shisham* trees, which are taken from it for transplantation on roads.

Plantations.—The area planted during the years under report was in excess of that of the past by 0·49 acres.

Groves.—The total area under groves at the end of the year 1895-96 was 176·82 acres. No statement of groves was forwarded with the last triennial report.

Avenues.—Steady progress has been made in tree planting during the triennial period under report. The principal work has been the extension and maintenance of avenues of trees. The subjoined statement shows the length of roads planted with trees in each year:—

Year.	Length of roads planted during the year.	Length of roads which failed during the year.	Number of trees planted.
	Miles.	Miles.	
1893-94	10·60	2	5,040
1894-95	13·81	3	6,414
1895-96	16·99	5	7,402
Total	41·4	10	18,856

In column 6 of the statement of avenues is also included the area on which trees were sold.

Income.—The income from the ornamental gardens maintained by the District Board shows a decrease of Rs. 275 as compared with the past. The decrease is attributed to injury caused by storms and drought.

A much larger income was realized from the sale-proceeds of roadside trees. The increase amounted to Rs. 6,309, and is due to the fact that a large number of trees were blown down by storms, and Rs. 1,750 on account of arrears of previous years were realized during the years under report. There was also an increase of Rs. 255 under the head Miscellaneous, owing to the sale of grass on roads.

Expenditure.—The expenditure on gardens show a decrease of Rs. 318, as compared with the past, which does not call for any remark.

The expenditure on avenues, incurred by the District Board during the years under report, show an increase of Rs. 3,235 as compared with the past. The extra expenditure was necessary, as owing to extension of avenues, a larger establishment was employed to plant and water trees. The establishment was kept up both for the maintenance of existing avenues as well as their extension. Hence it has not been possible to divide the cost between columns 9 and 10 of the statement.

Development of arboriculture by private persons.—No private persons, or village communities, interested themselves in arboriculture or planted trees.

Cultivation of fruit trees.—I had a few mango and orange trees planted in the District Board garden at Gujrat, and, if the experiment succeeds, it will be tried in future years.

GURDASPUR DISTRICT.

Rainfall.—The rainfall registered during the triennial period under report was 166.92 inches, against 111 inches shown in the previous report. The rainfall in the first two years was copious, but the third year was abnormally dry. On the whole, the rainfall was favorable, the average rate being about 55.64 inches a year.

Nurseries.—There are altogether nine nurseries in the district, viz. :—

1. Government garden, Gurdáspur.
2. Encamping-ground, do.
3. Sessions House, do.
4. Tahsíl garden, Pathámkot.
5. Do. Batála.
6. Do. Shakargarh.
7. Bidhipur encamping-ground on the Gurdáspur-Batála road.
8. Paniár on the Dinánagar road.
9. Jaura on the Kalánaur road.

Of these, No. 2 is the largest of all, and supplies the greatest number of trees for roadside plantations.

The area under nurseries is about the same as reported in previous years, i.e., about 3.22 acres.

The total expenditure on these nurseries during the three years under report was Rs. 1,163, and the income from the same was Rs. 118. The income is chiefly derived from the sale of fruit trees to private persons from the nurseries at the Gurdáspur encamping-ground and the Government garden.

Plantations.—The area under plantations was about 25.65 acres against 25.55 acres shown in the previous report.

Groves.—The area under groves has risen from 4.887 acres to 8.157 acres during the period under report. No plots are specially reserved for groves, but the small area shown in Statement No. IV is land under overgrown plants, too large for transplanting.

Avenues.—Of 605.39 miles, the total length of roads suitable for avenues, 466 miles have been fully stocked with trees, and arrangements are in progress to stock the remaining length as soon as possible.

Fruit trees.—The following plants were received from the Simla gardens during the three years under report :—

Apple trees	...	...	...	...	...	...	...	...	525
Pear "	...	...	...	...	...	...	...	...	200
Plum "	...	...	...	...	...	...	...	...	10
Peach " (American)	...	...	...	...	...	...	...	...	50

These plants were distributed as follows and are thriving :—

Pathámkot tahsíl garden	...	...	...	...	{ Apple trees	22
					{ Pear "	13
Dunera dák bungalow	...	...	...	...	{ Apple "	53
					{ Pear "	12
Dalhousie	...	...	...	...	{ Apple "	260
					{ Pear "	75
Bakloh	...	...	...	...	{ Apple "	110
					{ Pear "	10
					{ Apple "	50
Gurdáspur garden	...	...	...	...	{ Pear "	80
					{ Plum "	10
					{ Peach "	50
Batála	...	...	...	...	{ Pear "	10
Private gardens, Gurdáspur	...	...	...	...	{ Apple "	30

AMBALA DISTRICT.

Rainfall.—The rainfall in the years 1893-94 and 1894-95 was higher, and that in 1895-96 was a little lower than the average rainfall of the past three years.

Nurseries.—The total area under nurseries at the end of 1892-93 was 23·94 acres. 21·97 acres were given up in 1894-95, and 0·05 acres failed, and 0·15 acres were brought under nurseries in 1895-96. The total area under nurseries at the end of 1895-96 was 2·07 acres only. The decrease under this head appears striking, but what were classed as nurseries before 1892-93 existed more on paper than in fact. They were areas capable of being made nurseries under proper management, but did not deserve the name of nurseries, given to them by the then Secretary of the Local Fund, who was in immediate charge of the Arboricultural Department. These areas were struck off the office list in 1893-94, as per return then submitted.

Groves.—At the beginning of 1893-94 an area of 112·90 acres was shown under "groves," 69·03 acres were struck out of the returns in 1894-95, and 24·93 acres in 1895-96. The total area under groves shown at the close of 1895-96 is 18·94 acres. The decrease here is nominal, and merely due to more accurate classification and a truer interpretation of the term "groves." Before 1893-94 many areas were classed as "groves," which should have been omitted from the returns. The returns were revised in 1894-95 and 1895-96. Formerly the Secretary, Local Fund, through an assistant, had compiled the returns, and his figures were taken for granted. The figures were revised after check through the tahsils.

Avenues.—This statement shows 196·28 miles as the length of roads now fully stocked with trees, whereas the figure shown at the end of the last triennial period was 323·99. The decrease is 128 miles, which is remarkable. It is due mainly to—

- (1) transfer of roads to Public Works Department;
- (2) mistakes in calculating the length of the roads in the district.

A length of 34 miles of road was transferred to the Public Works Department. This has been shown in column 5 as a deduction.

A length of 12·80 miles of road was shown twice over in the last triennial returns. This has been deducted from column 5.

The Ambála-Náhan road was formerly shown as 30 miles long, no allowance being made for the portion which runs through foreign territory. Deduction has now been made in column 5.

The Ambála-Rupar road was shown as 40·57 miles long most carelessly, as a very large portion of this road runs through Patiala territory. This length has now been deducted, see column 5. A deduction of some 50 miles is accounted for by the above items, and the balance of 48 miles is to be accounted for by failures and delusive representations, made at the close of the last triennial period, when the returns were not submitted to the check they have subsequently received. The figure of 196·28 has been arrived at after reference to the tahsildars.

The number of trees alive at the beginning of 1893-94 was 81,799; 17,136 trees are said to have been planted in the period under report, and 42,066 were felled and sold, or failed, or were transferred to the charge of the Public Works Department. The total number of trees remaining at the end of 1895-96 is shown as 56,849 only. The above figures are given for what they are worth. They have been calculated in the office. Personally I consider them pure guess work, and I would ask whether the Forest Department seriously believes that trees are carefully counted in any district, and whether it would wish Deputy Commissioners to have them counted. It would be necessary to open registers and have them checked year by year, but it is daily becoming a question whether tahsil officials can even pretend to pay serious attention to the accumulated demands of different departments.

Income.—The income under the different minor heads during the three years under report was as follows:—

Year.	Ornamental gardens.	Nurseries.	Avenues.	Total.
1893-94	454	...	6,066	6,520
1894-95	659	...	3,378	4,037
1895-96	549	...	3,521	4,070

Rupees 659 shown under gardens against 1894-95, include Rs. 100 on account of outstanding receipts for 1893-94, which were realized in 1894-95, otherwise receipts from gardens during the three years were almost the same. Rs. 6,066, shown under avenues against the year 1893-94, include about Rs. 3,000 on account of large sales of roadside trees which took place in 1891-92 and 1892-93.

Expenditure.—The expenditure on arboriculture during the last three years under report, as compared with an income of Rs. 14,527, amounted to Rs. 20,411 as detailed below :—

Year.	Ornamental gardens.	Nurseries.	Avenues.	Total.
1893-94	3,646	...	4,728	8,374
1894-95	3,544	...	3,860	7,404
1895-96	1,897	...	2,700	4,633

The expenditure on arboriculture was considered too high in 1893-94 and 1894-95. It has now been cut down a good deal.

There are only two gardens in the district. One is the station garden at Ambála, which is an ornamental and vegetable garden in the civil station, and the other is one started at Morni in 1890 for experiments with tea and fruit trees. A separate reference has been made to you, suggesting that the District Board may be relieved of the responsibility of attending to and maintaining this garden by making it over to the Forest Department, to which Department alone it can be of actual interest. It is a dead loss to the District Board.

Miscellaneous.—There has been no particular calamity during the period under report affecting arboriculture, and there are no special features to comment on.

SIÁLKOT DISTRICT.

The failure of nurseries is a very serious matter, requiring immediate attention, as their proper maintenance at suitable spots is the first condition of successful arboriculture.

The extension of roadside avenues by 62.25 miles is very satisfactory, and compares favorably with 30 miles, extension in the last triennial period.

I will, in consultation with the Secretary, District Board, endeavour to devise more stringent measures for the protection of roadside trees from the ravages of goat herds, but the subject is a very difficult one, and prosecutions, as pointed out by the Secretary, District Board, are generally unsuccessful.

I shall watch with much interest the success of the experiment of appointing Superintendents of Arboriculture. It is proposed to allow them a small percentage of all profits, exceeding the average income on the last three years, in addition to their pay, and this will probably stimulate their exertions.

At the same time we have secured a better paid, and more reliable and responsible agency for conducting the annual sales.

Rainfall.—The rainfall during 1893-94 was abundant and seasonable; during the following year it was average, but 1895-96 was an unfavorable year for arboriculture, both the summer and winter rains being much below the average, and there was a break of 7 months from August 1895, during which time it was found very difficult to keep young trees alive.

Nurseries.—During the period under report some of the smaller nurseries on roads, which are fully stocked with trees, were abandoned, and the area has been reduced from 8.02 in 1893-94 to 6.79 acres. A good deal of tree planting has been done, and the nurseries are pretty well exhausted. The attention of the Tahsildárs and Superintendents of Arboriculture has been called to the great importance of maintaining nurseries, and it is hoped that not only will the old nurseries be restocked, but that new ones will be established on roads that are to be planted in the ensuing year. Owing to the failure of some of the nurseries in past years, a large number of plants had to be obtained from *zamíndárs'* fields, or purchased from private gardens and nurseries.

Plantations.—During the year 1895-96 about 2 acres of reclaimed land on the banks of the Aik *nadi*, near the town of Siálkot, were planted with *shísham* by the Siálkot Municipality. They are in a promising condition.

Groves.—The area under groves has increased from 13.15 acres in 1892-93 to 14.67 acres by the transfer of the Nakhnal and part of the Dhoda nursery.

Avenues on roadsides.—During the past three years a good deal has been done in the extension of avenues. The net increase in the length of avenues successfully planted being 62.25 miles. Out of a total length, 838½ miles, of roads and canals suitable for avenues, no less than 541.74 miles are now fully stocked with trees. Besides this, several miles of inner lines of trees have been planted on various roads, this work has been shown on the map by means of red dots along the green lines. In some of the old avenue many gaps have also been filled up.

District canals and bands.—The avenues of fruit-bearing and fodder trees, planted on *bands* and embankments of irrigation channels in past years, are flourishing, and attention continues to be given to the filling up of gaps.

Species of trees planted.—The species of trees planted on roadsides are chiefly *sissu*, *siris*, mulberry and *babul* with a few mango, *tún*, and *Cassia fistula* here and there. The further planting of *siris*, *bér*, and *bakáin* has been discontinued, and the planting of *sissu*, *Albizia procera*, *Bauhinia*, mango, *jáman* and *kikar* is being encouraged. The *bakáin* is unsuitable for avenues, as it not only gives little shade, but is short lived, whilst the *siris* and *bér* are lopped and disfigured by goat herds. The most valuable timber-trees are the *sissu* and *kikar*; the latter is easily grown, is specially useful for firewood and for all agricultural purposes, and fetches its full value at sales.

Experimental cultivation—American vine.—Cuttings were received from Simla a few years ago: most of them struck and were planted out a year after. During the past two years they have borne fruit, of a dark purple colour, about the size of a small round plum; the flesh is firm, juicy and well-flavored, though the bunches are small; but the plants are young and the fruit will doubtless improve.

Inga dulcis.—Some seed of this plant was received from the Director of Land Records and Agriculture, and sown two years ago in the District Fund garden to form a hedge. The seed germinated, but several plants died; those that survived have grown well.

Egyptian date.—A large number of plants were reared in the District Fund garden from seed received through the Director of Land Records in 1889-90. Several hundreds have been distributed over the district, and most of them are said to be doing well, especially those planted on the Arki canal and along the *Satráh band*. About 100 trees were planted in the Cantonment gardens and on the plateau of the fort in the city in 1890. Some of these are bearing fine large fruit now, to the great astonishment of the people, who have a saying that "the father plants the date for his grandson to enjoy the fruit." There are still several hundreds of seedlings ready for transplanting, which will be sent out shortly in consultation with the Local Boards.

Destruction of trees by storms, floods, &c.—During the past three years there has been no unusual damage to trees by storms or floods, but a great deal of injury has been done by goat herds. On every road *siris*, mulberry, *bér* and *kikar* trees, young and old, have been lopped, even up to 20 feet, for the purpose of feeding goats. Nearly every village has its flock of goats, especially those in the neighbourhood of cities and cantonments. The amount of damage that these people do to roadside trees is deplorable. They collect their flocks, numbering sometimes 200 or 300 head of animals, and, armed with long bamboos having a curved sharp knife at the head, they go in gangs along a road, lopping off large and small branches for their goats to feed on; if prevented or checked, they turn upon and assault the road *máli* or *mashki*; if prosecuted, they escape punishment by getting villagers to give evidence in their favor, because the latter are allowed to carry off the loppings. I think that *zaildárs* and *lambardárs* should be held responsible for preventing the destruction of trees near their villages. At any rate, some special measures should be taken to stop the destruction of trees by these people, who make large profits and pay no taxes.

Income from arboriculture.—The income from arboriculture has been good, though the average per annum was Rs. 24,704, against Rs. 26,827 in the previous triennial period, but the total receipts in that period were swelled by the abnormal income in 1890-91, which amounted to Rs. 38,361.

Expenditure.—The expenditure on ornamental gardens, nurseries, groves and avenues shows an average of Rs. 11,504, against Rs. 10,503 in the previous period. The following is a comparative statement of the income, expenditure and profits from arboriculture during the past two triennial periods:—

Year.	Income from gardens.	Income from roadside trees, grass, &c.	Total.	Expenditure on gardens.	Expenditure on avenues, nurseries and groves.	Total.	Surplus or profit.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1890-91 to 1892-93 ...	5,695	30,481	86,176	7,425	24,085	31,510	54,666
1893-94 to 1895-96 ...	7,024	67,088	74,112	8,836	25,678	34,514	39,598

Supervising establishment.—The arboricultural operations are divided into two parts—first, the maintenance of nurseries and groves, and the planting and maintenance of roadside avenues; second, the collection and sale of dead trees and loppings. The former is under the supervision of the *Tahsildárs*, who work under the direction of the Deputy Commissioner, whilst the latter is under the direct management of the Local and District Boards.

The supervising establishment consists of 5 muharrirs or jamadars, whose duty it is to look after the work of the *malis* and *bhistis*, and to dispose of dead trees under the direct supervision of members of Local Boards. In each tahsil a chaprasi is attached, who collects the proceeds of the sales of trees, and assists the jamadar generally. But the supervision exercised by tahsildars is only nominal, as these officers have a great deal of revenue and other duties, which prevents them from giving as much time to arboricultural details as it requires, and the work is almost entirely left in the hands of the muharrirs and tahsil jamadars. It has, therefore, been arranged, with the Deputy Commissioner's approval, to appoint 3 Superintendents of Arboriculture for the district, who will supervise the work, under the orders of the Tahsildar and District Board, and be responsible for carrying out all arboricultural operations, which it is proposed to extend and develop considerably in future years.

* *Work done by private persons and village communities.*—Horticulture continues to receive much attention from the people. Small fruit gardens and large orchards are being planted all over the district, as a source of profit. Small plantations of timber trees may be seen near almost every well in a village. The cultivation by *arains*, or market gardeners, of vegetables grown from imported seed is increasing. Applications are freely made for superior kinds of grafted and other fruit-trees from the District Fund gardens, which are supplied, as far as possible, to *zamindárs* at half price.

HOSHIARPUR DISTRICT.

Rainfall.—The rainfall during the three years under review is given below:—

[illegible]

The rainfall during 1895-96 was only about half the rainfall of each of the two preceding years, the winter rains especially being very scanty. This deficient rainfall caused some damage to young trees, transplanted during the two preceding favorable years.

The rains of 1893-94 and 1894-95 were copious, and the season very favorable.

Nurseries.—The area added to nurseries during the triennial period under report was 1·25 acres in 1895-96. Nurseries were formed at convenient spots on roadsides in all four tahsils of the district, as the existing ones were found insufficient for the number of plants required to fill up gaps on roads, planted out up to the end of the previous triennial period. The total area now under nurseries is 5·98 acres.

Groves.—The area under groves was neither added to nor diminished during the three years under report.

It is proposed during the current financial year to cut down a grove of old country mango trees, which bring in no appreciable income, on 1·32 acres of land in the station garden, and convert it into a nursery for fruit-trees, not obtainable in this district, for distribution to *samindárs*. During 1895-96 the District Board purchased 100 *langra* and 100 *bára masi* mango plants through the Collector of Benares; 96 plants died, and 33 have been sold at Rs. 2 each to well-to-do villagers, and the rest are to be planted in the new fruit nursery, and grafts sold at a reduced price. The demand for Malda and Bombay mangoes, orange grafts, *loquats* and peaches still continues.

Avenues.—The length of roads planted during the three years 1893-94, 1894-95 and 1895-96, was 6·34 miles, as detailed below :—

1893-94.					<i>Miles.</i>
(1).	Garhshankar-Santokhgarh road	...	...	...	3
(2).	Garhshankar-Núrpur road	...	...	...	3
1895-96.					
(3).	Garhshankar-Santokhgarh road	...	...	...	0.34
Total				...	6.34

The extension of avenues on the above-named roads was carried out in accordance with the plan of arboricultural operations sanctioned for this district, and which has now been completed. It is proposed eventually to plant out the 72.66 miles of roads, detailed below :—

						<i>Miles.</i>
(1).	Kolián-Miáni road	...	...	...	...	17
(2).	Háji pur-Talwára road	...	...	...	...	8
(3).	Háji pur-Mánserah road	...	...	...	...	9
(4).	Garhshankar-Satokhgarh road	...	...	...	...	11.66
(5).	Garhshankar-Núrpur	„	...	...	...	15.00
(6).	Bálachaur-Núrpur	„	...	...	...	12.00
					Total	72.66

An improved scheme of roadside arboriculture and repairs to roads has been in force in this district since July 1895. On each of the principal roads in the three tahsils of Hoshiarpur, Dasuya and Garhshankar, a gang of *máti beldárs*, under a jamadár, has been appointed to keep the road in good order, and to water and hedge young trees on the roadside, and to fill up gaps in avenues. The introduction of this scheme into the hilly tahsil of Una was unnecessary, as most of the roads in this tahsil are unsuitable for roadside planting. The old plan, of a number of *máti*s under one tahsil jamadár, continues in force here. The new scheme promises to be successful in improving the state of the roads, and the condition of roadside trees. All the main roads have now avenues along them. In addition to planting new avenues, the establishment was sufficiently employed in maintaining the extensive plantings of previous years, and in filling up the large clearances of inferior trees on the Hoshiarpur-Rúpar road, made during 1892-93.

The total number of trees planted out during the three years under report was as detailed below:—

Mango	...	...	...	...	...	...	...	...	3,783
Jáman	...	...	...	...	...	...	...	...	512
Shisham	...	...	...	...	...	...	...	...	22,190
Tún	...	...	...	...	...	...	...	...	102
Eucalyptus	...	...	...	...	...	...	...	...	174
Bamboo	...	...	...	...	...	...	...	...	15
Pipal	...	...	...	...	...	...	...	...	776
Pipal cuttings	...	...	...	...	...	...	...	...	1,855
Pilkan	...	...	...	...	...	...	...	...	5
Kikar	...	...	...	...	...	...	...	...	351
Beri	...	...	...	...	...	...	...	...	13
Phula	...	...	...	...	...	...	...	...	8
Date	...	...	...	...	...	...	...	...	180
Tút	...	...	...	...	...	...	...	...	13
Sarín	...	...	...	...	...	...	...	...	4
Total	...	...	...	...	...	...	...	...	29,981

Thinning and clearing of avenues.—The sum of Rs. 996 was realized from the sale of loppings of trees during the three years under report.

The following general rules have been issued on the subject of pruning:—

- I.—A height of 10 feet over the whole breadth of the road formation should be kept clear of obstruction.
- II.—No branch of a mature tree should be allowed to project over the road berm within this limit of height. Further, to ensure an equal and straight growth of the line of trees alongside the road, the offside should be similarly cleared to the same height.
- III.—Care must be taken that pruning of young trees is not carried out so as to injure the growth of the trees.
- IV.—The annual pruning and clearing away of branches should be undertaken during the months of November, December and January, but branches, which are found to obstruct traffic materially, should be removed with as little delay as possible, whenever observed, without waiting for the annual clearance.
- V.—Thick branches are to be removed by means of a saw, and small branches with the *dátri*.

Experimental cultivation.—The following descriptions of *Eucalyptus* have been tried in this district:—

- Eucalyptus tereticornis.*
- Eucalyptus rostrata.*
- Eucalyptus goniocalyx.*
- Eucalyptus globulus.*
- *Eucalyptus citriodora.*

The *Eucalyptus tereticornis* has been tried in and near the Sadr station, and in tahsils Dasuya, Garhshankar and Una. There is a fine avenue of them on one of the station

roads. Those grown at Hoshiárpur and Una have been most successful. The experiment with *Eucalyptus rostrata* has also succeeded pretty well. The other species have been a failure in this district. The following are the girth measurements of six trees at Una and six at Hoshiárpur, taken at a height of 4 feet from the ground:—

Hoshiárpur.—2 trees, girth 6 feet 6 inches; 2 trees, girth 6 feet 4 inches; 1 tree, girth 6 feet 3 inches; 1 tree, girth 6 feet.

Una.—3 trees, girth 6 feet; 2 trees, girth 6 feet 4 inches; 1 tree, girth 6 feet 2 inches.

Ten lbs. of *Robinia pseudo-Acacia* seeds were supplied by Conservator of Forests, Punjab, for sowing in the *chos*, in March 1896, which were distributed as follows:—

	lbs.
Khánpur bands	1
4 Táhsildárs, 1 lb. each...	4
Station gardens	5
	10

The seeds have germinated in the station gardens, Khánpur bands and in the tahsil nurseries, and the plants will now be planted out in the *chos*. The plants are all healthy and vigorous. Those on the Khánpur bands are doing well.

Two maunds of seed of *Acacia melanoxylin* were obtained from the Assistant Conservator of Forests, Naini Tál Division, in June 1894, and sent to Tahsildárs for distribution to zaildárs and lambardárs, but the experiment did not succeed. Another maund of seeds will be sent for, and the next experiment made under close supervision, at the Sadr station, as far as possible.

Three-and-a-half lbs. of *Inga dulcis* seeds were supplied by the Director of Land Records and Agriculture, Punjab, in March 1894, and the experiment made with them was successful. There is a young hedge of *Inga dulcis* in the station gardens, which promises to do well.

Some *marram* grass seed and seedlings were supplied by Government for experiment. Two-thirds of the seed did not germinate. The other one-third has done excellently, and arrangements are being made to make use of it to a large extent in the *chos*. The Khánpur bands have been planted over with it. Twelve tolas more of the seed have now been received, and will be experimented with this year. The seedlings did not sprout, and their failure appears to be due to their being in a withered state when received.

Other grasses and trees which have been successfully used for binding the soil on the banks of nullahs and on embankments are the following:—

Grasses.—Narra, kharkána, khabal, káhi and kákar.

Trees.—Baid, báns, bana, and japolota.

Cattle trespass and lopping.—One of the chief difficulties in raising plants is the damage done to them by cattle and goats. Cattle found injuring trees are impounded.

A *Cactus* fence has been found to be the most effective in preventing damage to young trees, as well as the most economical. It is also the most lasting. As saplings of less than 4 feet to 5 feet are not planted out on roadsides, the fences in this district are made about 5 feet high. Open brick-work and wire-netting would be good for fences, but are very expensive. Mud walls are not of much use, as they tumble down in the rains. Fences of dry thorns or branches are used, where *Cactus* is not procurable.

The lopping of branches of trees is done with a hand-saw, and of small branches with the *dátri*.

Fodder trees.—Much attention has been paid to the subject of planting out *pípal* trees and cuttings during the year 1895-96, and altogether 776 *pípal* plants and 1,855 *pípal* cuttings have been planted on roadsides during the period under report. It is intended to increase the proportion of *pípal* plants and cuttings planted out on roads during the next triennial period. Three hundred and twenty-seven *kákar* trees have also been planted out on roadsides. This description of tree has not usually been planted out on roadsides, as it does not conform to the conditions of a good avenue tree, but a larger number will be planted out in future.

Encroachments on roadside trees.—Encroachments on roadside trees by *zamindárs* have greatly increased of late; this is especially the case in the civil station, where there are gardens and compounds attached to houses, whose boundaries are within the limits of the station roads, or join the boundaries of the roads. Trees which have been planted and

cared for by the District Board, and which are now of great value for building and other purposes, are being claimed by different individuals, who in some cases have only recently enclosed them within their hedges. The District Board has lately had much litigation with regard to ownership of roadside trees with *zamindárs*, and has recently lost a case, referring to the ownership of a tree on the station roads, which will probably result in much loss to the District Board. When roadside avenues were first laid out, much regard was not paid to the question, whether the land belonged to the road or to the villagers, and in many cases the avenues were planted through the agency of the *zamindárs*. No claims were brought forward while the trees were young and useless, but, now that they are valuable, they are being fought for by owners of land adjoining the roads.

Financial results.—The following is a comparative statement of the income, expenditure and profit or loss from arboriculture during the past two triennial periods:—

Year.	Income from gardens.	Income from sale of roadside trees and loppings, &c.	Total.	Expenditure on gardens.	Expenditure on arboriculture.	Total.	Profit or loss.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1890-91 to 1892-93	2,105	23,556	25,661	3,933	20,545	24,478	+1,183
1893-94 to 1895-96	2,692	14,881	17,573	3,695	20,873	24,568	—6,995

The decrease in the income from sale of roadside trees and loppings, &c., is due to the large amount which was realized in 1890-91 to 1892-93 from sale of *phula*, *tút*, *berí*, *sarín*, *kíkar*, *dek*, &c., trees on the Hoshiárpur-Rúpar road, whereas no such large sale was held during 1893-94 to 1895-96.

The decrease in the expenditure on gardens is due to the Sadr Kacherry garden and the Dasúya tahsíl garden having been leased out on *chokota* and the *málís* dismissed. The small increase in the expenditure on arboriculture is due to the extension of avenues, and to the new arrangements which have been made for tree-planting and repairs to roads.

Establishment.—The following is the detail of the establishment now employed on the maintenance of existing trees and nurseries, and the plantation of new avenues and nurseries, the expenditure being charged half to Civil and half to Public Works:—

Tahsíl Hoshiárpur.

	Rs.	a.	
1 Jamadár	10	0	per mensem.
5 Do.	7	0	each.
54 Málí-beldárs	4	8	each.

Tahsíl Dasúya.

1 Jamadár	7	8	per mensem.
9 Do.	7	0	each.
1 Málí-beldár	5	0	each.
80 Do.	4	8	each.

Tahsíl Garhshankar.

1 Jamadár	8	0	per mensem.
9 Do.	7	0	each.
72 Málís	4	8	each.

Tahsíl Una.

1 Jamadár	8	0	per mensem.
20 Málís	4	0	each.
1 Do.	3	0	each.
1 Do.	1	0	each.

The establishment for gardens is as follows:—

1 Málí	8	0	per mensem.
7 Málís	5	0	each.
3 Do.	4	0	each.
2 Do.	2	8	each.

The establishment was supervised by the Presidents and Members of Local Boards and by *zaildárs*.

The map submitted with the last triennial report is resubmitted with a tripled-otted red line marked on it, to show the roads planted with young trees during the triennial period under report. The map also shows the nurseries established during 1895-96.

SIMLA DISTRICT.

Rainfall.—The average rainfall of the triennial period under report has been somewhat in excess of that of the past. The heaviest rainfall, it will be noticed, was in 1894-95 when it far exceeded the average.

Nurseries.—The total area under nurseries is 8.02 acres. Fruit-trees are the principal things grown for distribution by Government and for sale. The total number of fruit-trees distributed was 2,985. Prior to 1893 trees were mostly distributed to Government officials, who owned estates in the Simla station and adjoining Native States. Since that year the distribution to Native States has been continued, but the greater portion has been made over to the two Tahsildars in the district for distribution to *zamindars*, who have taken a keen interest in fruit culture. The trees are propagated at the Mahasu orchards, a few miles out of Simla.

Plantations.—Seven acres only were planted with trees, *i.e.*, six acres in 1893-94 and one acre in 1894-95, but of the plantings made in 1893-94 two acres failed, so that the successful plantings amount to only five acres in all.

Groves.—There are no groves in Simla proper, but at Kálka, at the foot of the hills, 13.62 acres are planted in the encamping-ground. The trees are in a flourishing condition.

Avenues.—Owing to the hilly nature of the district, it is impossible to plant any lines of trees. At Kálka, however, where the ground is more or less level, 2.66 miles are planted with trees.

Income and expenditure.—The total income and expenditure during the three years, 1893-94 to 1895-96, has been Rs. 47,606 and Rs. 42,479, respectively, giving a surplus of Rs. 5,127. Below in tabular form is compared the income and expenditure of the present period with that of the past :—

Income.

Years.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.
1890—93	31,043	...	8,372	...	3,536	42,951
1893—96	32,066	1,330	10,190	...	4,020	47,606

Expenditure.

Years.	WORKS.								ESTABLISHMENT.	Total.
	Ornamental gardens.		Nurseries.		Plantations and afforestations.		Groves and avenues.			
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestations.	Extension of plantations and afforestations.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.		
1890—93 	19,843	...	2,077	1,126	8,906	...	...	...	13,420	45,372
1893—96 	18,366	...	2,202	500	6,323	350	157	...	14,581	42,479

HAZARA DISTRICT.

Rainfall.—The total rainfall during the last three years was :—

1893-94	...	...	...	...	...	...	82.36
1894-95	...	...	...	...	...	...	63.79
1895-96	...	...	...	...	...	...	41.90

and the average of the triennial period was 62.68, that is 17.84 in excess of the average rainfall of past years. The rainfall in 1893-94 and 1894-95 was much above the average, as shown in the statement, but in 1895-96 it was below the average of the last five years, especially in the winter season.

Nurseries.—There are nine nurseries in the district, under the charge of the District Board and Municipal Committees, and, on the whole, they are doing well.

About 500 young trees of different varieties were distributed amongst *zamindárs* free, or at a nominal price, for private plantations.

The following young trees were supplied to the Secretary of the Grass Committee, Abbottabad, for the Military *rakh*, at a nominal price of one anna per tree:—

								Trees.
1893-94	...	...	...	...	...	...	...	500
1894-95	...	...	...	...	...	...	...	804
1895-96	...	...	...	...	...	...	...	731

About 800 fruit-trees were obtained from the Annandale garden, Simla, during the last three years, of which 200 were distributed amongst *jagirdárs* and *lambardárs*, and the remaining 600 were planted in the public gardens, Abbottabad, Mansehra, Chittigatti, Khoti-ki-kabar and Haripur. Those planted in the Mansehra tahsil were much damaged by the deficient rainfall. A plot of land was added to the Mansehra nursery garden during 1895-96, for the cultivation of fruit-trees and other young plants.

Plantations.—The Statement No. III shows the area under plantations in the Sarhan and Civil *rakhs*, Abbottabad.

A large number of young trees are planted every year in these *rakhs*, but very few young trees succeed, owing to the scarcity of water on these hills during the hot weather.

The existing trees in these two *rakhs* are now in a flourishing condition.

Groves.—No new groves were planted during the triennial period under report.

Some 400 young trees were planted on the Band Kot Najibulla on the Haripur-Sarai Kala road, and are doing well.

Avenues.—Most of the roads under the charge of the District Board are situated in hilly tracts, where tree-planting is either unnecessary, owing to the country traversed by the road being already well afforested, or impossible, owing to the physical configuration of the locality.

A few miles of the Haripur-Khánpur and Chittigatti-Baffa roads were planted with young trees.

The work done during the last three years has consisted mostly of replacing dead trees with fresh ones, and of planting up gaps.

Cultivation of fruit-trees.—There are several fruit gardens in the district, especially in the Haripur tahsil.

The Municipal Committees of Haripur and Abbottabad keep up large establishments for the maintenance and preservation of their extensive gardens.

The people of the district are encouraged in fruit cultivation by providing them with young fruit-trees free of cost, or at a nominal price, so far as the District and Municipal Board nurseries can admit of this distribution.

Fodder trees.—No trees are planted for fodder, but leaves of certain trees and plants are used for feeding cattle.

Work done by private persons.—No private individual has done any tree-planting, or arboricultural work, of sufficient importance to deserve special mention in this Report.

The inhabitants of this district are very fond of planting fruit and other useful trees on their private lands, and also in burial-grounds and round tanks and wells.

Income.—The total income derived from all sources and credited to the District Fund was—

								Rs.
1893-94	...	...	...	...	...	...	...	178
1894-95	...	...	...	...	...	...	...	194
1895-96	...	...	...	...	...	...	...	280

and to Municipal Funds—

1893-94	...	...	...	...	...	...	...	1,987
1894-95	...	...	...	...	...	...	...	2,562
1895-96	...	...	...	...	...	...	...	1,920

The income both under the District and Municipal Funds has improved since the last triennial period.

It would have been much greater, had the fruit crops not been damaged by the hailstorms, which occurred more than once during the last three years.

Expenditure.—The total expenditure was—

<i>District Funds.</i>								Rs.
1893-94	...	...	...	...	...	...	...	744
1894-95	...	...	...	...	...	...	...	714
1895-96	...	...	...	...	...	...	...	669
<i>Municipal Funds.</i>								
1893-94	...	...	...	...	...	...	...	1,738
1894-95	...	...	...	...	...	...	...	1,862
1895-96	...	...	...	...	...	...	...	1,823

The establishment kept up by the District Board and Municipal Committees is as follows :—

<i>District Funds.</i>								Rs.
1 Máli at Rs. 7 per mensem for Abbottabad nursery	...	...	...	...	...	...	...	84
2 Mális at " 6 " " each for Civil rakh	...	...	...	...	...	...	...	144
1 Máli at " 6 " " for Sarhan rakh	...	...	...	...	...	...	...	72
1 Do. at " 6 " " for Dhobighát	...	...	...	...	...	...	...	72
1 Do. at " 6 " " for Mansehra	...	...	...	...	...	...	...	72
1 Do. at " 6 " " for Chittigatti	...	...	...	...	...	...	...	72

Haripur—

<i>Municipal Funds.</i>								
1 Jamadár Máli at Rs. 15 per mensem	...	...	...	...	...	...	...	180 ³
1 Assistant Máli at " 7 " "	...	...	...	...	...	...	...	84
1 Máli at Rs. 6 per mensem	...	...	...	...	...	...	...	72
8 Mális at Rs. 5 each per mensem	...	...	...	...	...	...	...	480

Abbottabad—

1 Jamadár Máli at Rs. 15 per mensem	...	...	...	...	...	...	...	180
1 Assistant Máli at " 7 " "	...	...	...	...	...	...	...	84
4 Mális at Rs. 6 each	...	...	...	...	...	...	...	288
1 Máli at " 5	...	...	...	...	...	...	...	60
1 Do. at " 2	...	...	...	...	...	...	...	24

Supervision.—There is no special supervising establishment, the Overseer, Local Funds, and the Tahsildárs, in their respective tahsils, exercise the necessary supervision.

General remarks.—The slow progress of arboriculture in this district is chiefly due to the fact that the Local Bodies here are so poor that they can hardly meet the fixed and compulsory charges of various establishments, and very little money is left even for the Public Works charges.

The demands of the Educational and Medical Departments are daily increasing, and swallow up most of the Budget allotment.

KANGRA DISTRICT.

Rainfall.—This return gives the rainfall for the Sadr station, and the entries give no correct idea of the rainfall of the district generally.

Nurseries.—During the triennial period under report only gaps in the existing nurseries were filled up, and 125 acre of land was added to the nursery at Tahsil Pálapur.

Plantations.—There are no such plantations in the district as defined in footnote (a) of the return.

Groves.—Regarding the grove on the Núrpur dák bungalow hill, the trees are coming on pretty well, and the brushwood is increasing. The plantation shows what can be done with a bare rocky piece of ground, but it has cost a great deal of money.

The expenditure on the plantation has been as follows :—

						Rs.	a.	p.
Fencing and repairs	...	...	...	...	...	147	4	0
Cultural operations	...	...	...	...	...	448	12	9
Pay of máli	...	...	...	...	...	238	5	2
Total cost of forest work for which no details are available.	...	...	...	...	...	237	9	4
						Rs.	1,071	15 3

The cultural operations consisted in sowing *chil* seed in 10,560 patches in the plantation, transplanting 650 *bahera*, *jáman*, date, *Eucalyptus* and bamboo plants in 1888-89, at a total cost of Rs. 570-10-6, including resowing of failures in *chil* plots; in sowing *chil* and *Robinia* seed, and transplanting *táli* and willow cuttings, and replacing plants which had died in the avenue in 1890-91, at a total cost of Rs. 106-6-0; in sowing 5 acres with *chil* in 1891-92 (this includes the cost of fencing), and transplanting the avenue plants at a total cost of Rs. 23-2-0; in sowing 13 seers of *chil* seed in 1892-93 at a cost of Rs. 2-4-0.

The results of the above work, at the present time, may be said to be almost an entire failure. The plantation at the present moment contains a number of scattered *chil* trees, chiefly situated in the nullah which runs through the plantation, and towards the lower end of it. These are at present in a fair condition of growth. They do not, however, represent anything like the total number of sowings. As regards the remaining kinds of trees planted and sown, none exist at the present moment, except the trees planted along the road, leading alongside the plantation to the bungalow, which are in a fair condition, with the exception of a few that require replacing.

With the exception of the *chil* mentioned above, the plantation contains only *garna* bushes, which are gradually spreading, and will in time cover all the soil in the plantation.

The area has been resown over and over again in the years following the original operations, and the total result are the *chil* trees mentioned above, which appear to be the result mainly of the original sowings. The seed all germinated fairly well, and the plants grew to a height of 2" to 3", and then, as soon as the roots touched the hard layer of rock underneath, they die away. The soil on the area is very shallow, and the rock underneath hard and impermeable to the roots, and it is very little use attempting anything more just now. Work on the plantation was stopped in 1892-93, and nothing has been done since, except to keep the fences in repair.

I would recommend that, at any rate for some years, no further expense in the way of operations should be incurred; the area should be kept closed, and fences kept in repair; but all other expenses should be stopped. There is no advantage now in keeping on a professional *máhi* at Núrpur, all repairs to the fences could be done by ordinary coolies, under the superintendence of the Forest guard stationed at Núrpur, and he could also look after the plantation in addition to his ordinary duties.

The other groves in the Kángra Dispensary and *patwárhána* and tahsil compounds, as well as the Kutcherry gardens, were maintained in fair condition during the triennial period under report. Besides this, 6-acre of land was added to the tahsil garden at Pálapur, and fruit trees received from the Simla gardens were planted in it.

Avenues.

Years.	Length of roads fully stocked with trees at beginning of year.	Length of roads planted during the year.	Length of roads which has failed during the year.	Length of roads which were fully stocked with trees alive at the end of the year.
	Miles.	Miles.	Miles.	Miles.
1893-94	367.34	66.69	39.27	394.76
1894-95	394.76	27.97	14.89	407.84
1895-96	407.84	14.941	5.82	416.95

Thus the successful work during the last three years was 49.615 miles, which was nearly the same as in the previous triennial period, viz., 49.34.

The length of roads planted during the triennial period under report was 109.601 miles, as compared with 88.14 miles during the previous triennial period.

The increase of 21.461 miles is due to the fact that in the year 1893-94 66.69 miles of roads were planted with trees.

Trees were mostly planted on new lines, but gaps in the old roads were also filled up. This was the concluding year of the quinquennial programme of arboricultural operations, extending over a period of five years, from 1889-90 to 1893-94. The length of road which failed during the period amounted to 59.986, as compared with 38.80 miles in the previous triennial period. In order to utilize the services of the District Board members, the Board has agreed, as an experimental measure, to entrust the road from Sulah to Bhawarna to Mr. Greensill, who promises to give 100 plants of *oi*, *tún*, mango, and *bohar* for every tree cut, and maintain the 100 plants for three years.

I am a little doubtful about this experiment; but Mr. Greensill is an active and most useful member of the Board, and can be trusted to do his best.

Income.

Years.	Gardens.	Avenues.	Total.
	Rs.	Rs.	Rs.
1893-94	198	497	695
1894-95	264	591	855
1895-96	178	423	601
Total	640	1,511	2,151
Total 1890-91, 1891-92, and 1892-93	824	2,375	3,199

There has been a falling-off of Rs. 1,048 in income, as compared with that of the previous triennial period, viz., Rs. 184 in the receipts from gardens, and Rs. 864 in the receipts from avenues. The reason is that there were more high winds and storms in the previous triennial period, by which many trees were blown down, the sale of which increased the receipts under this head. The falling-off in receipts under "Gardens" is partly due to the fact, that in the previous triennial period some big trees were cut from the Kutcherry gardens, to make room for strawberry beds and vegetables. The trees were sold, and the sale-proceeds increased the receipts under this head. The decrease is also partly due to the transfer of some regular subscribers to the gardens from the station. There is in this district no hope of making the sale of roadside trees a good source of income. The people get their firewood from the forests free, and will not buy trees, unless they are very large and are suitable for building timber, and even then they will give only a very small price for them.

Expenditure.

Years.	Gardens.	Nurseries.	Groves and avenues, &c.	General supervising establishment.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
1893-94	809	310	2,520	252	3,891
1894-95	754	...	2,163	252	3,169
1895-96	758	...	961	252	1,971
Total	2,321	310	5,644	756	9,031
Total 1890-91, 1891-92, and 1892-93	2,855	1,523	5,975	740	11,090

The decrease of Rs. 2,059 in the expenditure, as compared with the previous triennial period, viz., Rs. 534 under groves, Rs. 1,213 under nurseries and Rs. 331 under avenues, is due to the restriction of tree-planting to the important roads of the district.

After the expiry of the five years' programme, the Tahsildárs, who are also the Presidents of the Local Boards, were called on to report on the result, and also to make suggestions, as to the maintenance of the existing trees, with regard to reduction of establishment, if possible. On the receipt of the reports, it was thought necessary to maintain the existing trees, and reduce the expenditure for 1894-95 to Rs. 2,000, and for other years to Rs. 1,000. The establishment for roadside trees was out of all proportion to the sums available for repairs of the roads. The Tahsildárs like to have permanent gangs of coolies in their tahsils, engaged in planting out or tending trees. I have seen trees being planted on roads, which were very badly in need of repairs.

The Board resolved to reduce its expenditure on roadside trees, but to maintain a small establishment on certain main roads, and to concentrate its efforts, instead of planting out trees everywhere, without regard to the state of the road, or the possibility of tending the trees.

*General.—Cultivation of fruit-trees and their distribution among villagers, &c.—*In the year 1893-94 the Director of Land Records and Agriculture, Punjab, supplied the fruit-trees noted below—

Apple trees	...	...	...	...	100	} Received from the Annandale gardens, Simla.
Peach "	...	...	...	...	100	
Pear "	...	...	...	...	200	
Cherry "	...	...	...	...	25	
Total	...	...	...	...	425	
European budded apple trees	...	...	...	...	103	} Received from the Agri-Horticultural gardens, Lahore.

These were distributed to the owners of gardens at Dharmsála and tea planters at Pálampur, and were also planted at the Kutcherry gardens at Dharmsála and the tahsíl gardens at Pálampur and Kángra. They were reported to be doing well.

In the year 1894-95—

Apple trees	...	...	...	...	...	500	Received from the Annandale gar- dens, Simla.
Peach "	...	...	...	...	...	50	
Chestnut "	...	...	...	...	...	25	
Pear "	...	...	...	...	...	100	
Cherry "	...	...	...	...	...	75	
Total	...	...	...	...	...	750	

Half the pear trees were sent to Kulu, as they are not a success at Kángra : it is too wet ; and the rest were distributed to professional fruit-growers at and around Dharmsála, 125 apple trees were sent to Kulu, 125 retained at Dharmsála, and the rest divided in equal parts between Kángra and Pálampur.

The cherry trees were also divided in the same way as the apples.

Peach trees were planted at Dharmsála, and some were sent to Kángra and Pálampur.

Chestnut trees were sent to Pálampur and distributed at Dharmsála.

The trees were distributed to the villagers, owners of gardens at Dharmsála, Kángra, Pálampur and Kulu, and also planted at the public gardens at Sultánpur, Nagar, Kángra and Pálampur, where they, with few exceptions, are doing well.

In 1895-96—

Apple trees	...	...	...	...	...	200	Received from Mahásu orchard, Simla.
Pear "	...	...	...	...	...	150	
Peach "	...	...	...	...	...	100	
Cherry "	...	...	...	...	...	75	
Plum "	...	...	...	...	...	20	
Chestnut "	...	...	...	...	...	25	
American seedling peach trees	...	...	...	...	...	100	
Total	...	...	...	...	...	670	

One hundred pear and 100 apple trees were sent to Kulu, and the rest of them were divided among Dharmsála, Pálampur and Kángra. Plum and peach and cherry trees were equally distributed among Kulu, Kángra, Pálampur and Dharmsála. Six chestnut trees were put in the Kutcherry garden at Dharmsála, 6 at the Kángra tahsíl garden, and 6 at Pálampur tahsíl garden (new), and the rest were distributed to the residents at Dharm-sála.

The plants are doing well, with the exception of a few which withered and died of dry cold.

As was stated in the report of the last triennial period, it is too soon to be able to report on the experiment of fruit growing in the Kángra and Pálampur tahsíls. Some apple trees have commenced fruiting during this triennial period in Kulu and the Kutcherry gardens at Dharmsála. The fruit, though injured by hailstorms, was excellent. Cherries are not very successful anywhere. Pears do not do well in the Kángra Valley, even where there is less rainfall than at Dharmsála. Apples should do better. The professional fruit-growers in Kulu do not care for the Simla plants, which are said to introduce blight into their gardens.

KULU SUB-DIVISION.

The rainfall return has been filled in, but there have been no arboricultural operations in Kulu for the last three years, at least none undertaken on behalf of the District Board. Passing along the roads of the Sub-division, I occasionally notice round stone structures (called *gamla* in Kulu), which have evidently been erected with a view to the protection of young seedlings on the roadside. But the seedlings planted in these have died in every case that I can remember, except a few, perhaps fifty, on the road above the Dalasni bridge between Bajaura and Larji, and a very few on the Palách-Nirmand road. Considering the large number of sheep and goats which constantly travel along the roads in Kulu, I should say that any attempt to get roadside trees to grow is foredoomed to failure in the future, as it has been in the past, unless an expenditure be incurred, which would be out of all proportion to the value of the possible results.

CANAL DIVISIONS.

1ST DIVISION, BARI DOAB CANAL.

District Gurdáspur.—But little was needed to be done, as this part of the canal has been established a long time. An area of 16·15 acres has been added to the plantations, and an area of 44·00 acres has been cleared of trees, in order to allow of improvements being made to the canal. A mile of avenues has been added, and 1·4 mile had to be cut down, to allow of repairs being carried out. The total expenditure in this district for the past three years has been Rs. 4,194, and the income Rs. 27,455, showing a profit of Rs. 23,261.

District Amritsar.—The plantation area has been increased by 42·6 acres, and the length of avenues by five miles. The expenditure has been Rs. 6,853 and the income Rs. 3,937, showing a loss of Rs. 2,916.

District Lahore.—The increase in the plantation area has been 6·5 acres, and in the length of avenues one mile. The expenditure has been Rs. 1,290 and the income Rs. 16, showing a loss of Rs. 1,274. As a whole the profit from plantations during the past three years has been Rs. 19,071.

2ND DIVISION, BARI DOAB CANAL.

Plantations.—The area under this head at the beginning of the year was 1,428·31 acres. It was stated in the last triennial report that some part of the plantation at Koháli, on the Lahore Branch, would be sown with *kikar*. This was done in 1893-94, an area of 3·49 acres being then sown. The same area is shown as failure, as the *shisham* seed sown in 1892-93 failed to germinate.

In 1893-94 a plantation was formed on Main Branch Lower, between R. D. 94 and 101, (Vallah bridge and Grand Trunk Road bridge) on both sides of the canal, the area planted being 25·48 acres. The old plantation was first cleared of all except the line trees (avenues), and the produce sold. The area cleared is shown as failure during the year in Table III. The total area of plantations at the end of the year equals that at the beginning, as all the area sown replaced an equal area which had failed, or been cleared, and the produce sold, and amounts to 1,428·31 acres.

Avenues.—The length of avenues at the beginning of the triennial period was 103·06 miles and was the same at the end of the period. There are a few gaps, but, on the whole, the avenues are in a flourishing condition. The gaps occur, as a rule, in places where the soil is affected by *reh*, and is, therefore, unsuitable for trees. The avenues consist principally of *shisham* and *kikar*. There are also some few *tún* and mulberry trees.

Dead trees in the avenues are not replaced, it being found expensive to do this. When a portion of the canal is disforested and restocked, the dead line trees of that part are replaced by young ones. At present this is being done between B. M. 75 to 80 and B. M. 94 to 101.

Income and expenditure.—The total expenditure during the period under report is Rs. 7,017, against Rs. 10,358 during the previous triennial period. The expenditure in 1893-94 and 1894-95 was incurred principally on special maintenance of the Vallah plantation, B. M. 94 to 101, Main Branch Lower. The expenditure on this account was much reduced in 1895-96 and in 1896-97 it will almost disappear.

The income for the three years amounted to Rs. 20,227, against Rs. 31,202 during the three previous years. The decrease is due to reduction in the sale of timber. The timber near Amritsar has been sold, and there is no new area being disforested. Further sales will, in future, be effected from some old rájbaha land.

The net profit on plantations during the three years amounts to Rs. 13,210, against Rs. 20,844 during the previous three years; the falling-off being due to a smaller area disforested, and, therefore, smaller sales of the produce of clearing.

3RD DIVISION, BARI DOAB CANAL.

Nurseries.—There are no nurseries in this Division, any requirements being met from the newly enclosed plantations.

Plantations.—An area of 23 acres of land on the left bank of the Main Branch Lower from R. D. 120,000 to 130,000 was selected last cold weather. After the old timber

had been removed, the ground was prepared, levelled, and the site fenced in. The whole area will be sown with *shisham* seed early in the next official year.

The three miles shown as failures during the year 1893-94 is due to the felling of trees, to allow for the widening of the Luliáni Rājbaḥa.

Avenues.—These are line trees along the canal, one row on each bank. There were no operations under this head during the triennial period under review, as the lines are all stocked on both banks. The one mile of trees, shown as failure during 1893-94, and two miles during 1894-95, are due to trees blown down by storms, and dry trees felled at different places.

Revenue and expenditure.—There was an income of Rs. 27,733 during the three years. Of the total, Rs. 16,662, shown under plantations, Rs. 11,662 were the sale-proceeds of wood on the Vahn Escape, and Rs. 5,000 of trees cut from the plantation on the Main Branch Lower. Rs. 1,913, shown under avenues, were the sale-proceeds of trees cut down from line trees along the canal banks, and Rs. 9,158, shown under head "miscellaneous," were the sale-proceeds of grass on the banks of canals and rājbaḥas.

The total expenditure during the three years was Rs. 5,188, of which Rs. 4,130 were spent on the maintenance of existing plantations, Rs. 89 on starting a new plantation, Rs. 602 on maintenance of avenues, and Rs. 367 on ornamental gardens. Hence the net receipts during the triennial period amounted to Rs. 22,545.

UPPER SUTLEJ CANALS DIVISION.

Plantations.—The only plantations on these canals are in the chauḡki compounds, and consist principally of *shisham* and fruit-trees. There are good *shisham* plantations at Ganda Singh, Hussain Khanwāla, and Ladiān on the Katora Canal; at Māmoki and Dipālpur on the Khanwāh Canal; at Lolā Gudār, Malkāna and Taher on the Upper Sohāg Canal; and on Lolā Gudār, Shahamud, Havali Kālewāl and Chauwat on the Lower Sohāg Canal. Besides *shisham*, there are some *kikar* and a few mulberry and *sirās* trees too. The trees in these plantations are so far grown up as to require no artificial watering. At Kulyāna the trees are in fair condition, but they are low in stature and young, and require watering and careful tendering. Situated on a mound, the remnant of an old village site, Siyakka chauḡki, on the Khanwāh Canal, is not favorable for the growth of plantations. The subsoil is a poor earth, mixed with brickbats and salt efflorescence. The *shisham* trees planted there many years ago are still very low and make very little progress. A plantation has also been started at Māmoki Sub-divisional Office during 1894-95.

There exist nice little fruit gardens in the compounds of the chauḡkis at Gunda Singh, Māmoki, Lola, Dipālpur, Havali and Kālewāl, and about 400 fruit-trees have been planted during the three years under report at different chauḡkis. The date-palms in Māmoki chauḡki, that had attained a height of over 12 feet, as reported in the last triennial report, all died, when the compound was flooded in 1894. In other chauḡkis these palms are promising, but they have not attained a height above 6 feet, except at Lola, where two of them are about 9 feet high. None of the trees have borne any fruit as yet. As the compounds of all the chauḡkis are pretty well stocked with trees, there has been no increase in the area of plantations.

Groves.—There are no groves in the Division.

Avenues.—There are no avenues, properly so-called, in the Division. Those shown in the statement are common country trees, spontaneously grown, which, for the most part, line the canals. They consist almost entirely of *kikar*, with some *shisham*, tamarisk, and a small proportion of *jand*, *ban* and *karir* trees.

These trees mostly grow near the inner edge of the channel, and are very frequently blown down into them by high winds and duststorms, which prevail in this part of the country. To prevent this, all trees growing within 10 feet of the edge of the channel are cut down and sold.

On the Lower Sohāg Canal there are no trees, except tamarisk and a few *kikar*, that have grown up spontaneously on the main line, miles 25 to 33; Sohāg Branch, miles 6, 7, 8 and 16 to 20; the first ten miles of Pāra Branch; and on the Havali, Musewal and Pākpattan Rājbaḥas, for about a couple of miles near their head-reaches. The tamarisk on the Pāra Branch are growing luxuriantly, and have attained a height of from 10 to 15 feet.

Income.—The income is derived principally from the sale of fallen and dead trees; also from green trees, cut down within ten feet of the edge of the channel; and from sale of

grass and from *manj sarkanda* reeds, which grow up spontaneously. The income for the three years under report is given below:—

									Rs.
1893-94	...	...	...	...	...	...	...	...	7,412
1894-95	...	...	...	...	...	...	...	...	6,191
1895-96	...	...	...	...	...	...	...	...	9,650
Total									23,253
Average									7,751

The average income during the three years under report was Rs. 7,751, compared with Rs. 7,634 during the previous period. The income under sub-head "miscellaneous," or sale of grass and *sarkanda*, which had fallen to Rs. 1,658 in 1891-92, increased to Rs. 2,270, on an average, during the three years under report. The increase was due to the fact that, near large towns and villages, a higher amount was realised, owing to the large demand for fodder during the past three years. The increase under the head "plantations" in 1895-96 was due to the supply of a large quantity of canal wood for burning bricks, and for constructing and renewing wooden bridges, in Chunián and Pakhoḳi Rájbahás.

Expenditure.—The expenditure incurred has almost entirely been on maintenance and extension of plantations in chauki compounds. The principal expenditure was incurred on watering plants by Persian wheels, where suitable wells were available, or by *bhistis*. These canals run only for a part of the year, and most of the chauki compounds are too high to be irrigated by flow. The plants are, therefore, watered almost entirely from wells.

The expenditure for the three years has been in —

									Rs.
1893-94	...	...	...	...	...	...	...	...	2,629
1894-95	...	...	...	...	...	...	...	...	3,532
1895-96	...	...	...	...	...	...	...	...	3,401
Total									9,562
Average									3,187

against an average of Rs. 2,072 in the previous three years. The increase is chiefly attributable to starting new plantations of fruit-trees in several chauki compounds, and watering them by Persian wheels. The average annual income exceeds the average expenditure by Rs. 4,564.

MULTAN CANALS DIVISION.

SIDHNAI SUB-DIVISION.

Arboriculture operations have now been carried on in the Sidhnai Sub-division for ten years, the report now submitted being the third report.

At the close of the last triennial period, *viz.*, March 1893, the area and length treated stood as follows:—

Nurseries	...	...	...	...	...	...	13.62 acres.
Plantations	...	...	...	...	...	...	46.41 "
Avenues	...	...	...	...	...	...	26.24 miles.

The following are the net results at the end of the years 1893—96.—

Nurseries	...	...	...	...	...	...	13.27 acres.
Plantations	...	...	...	...	...	...	46.61 "
Avenues	...	...	...	...	...	...	48.49 miles.

During the triennium under report experiments were made of sowing seed on the Chawán, Kukarhatta and Mungawála Rájbahás, but the result has not been very satisfactory, owing to the failure of the canal water earlier than usual in 1895-96. Out of 21 miles sown, only nine miles have succeeded. The land, in some places is bad, where *kikar* will be tried.

The avenues on the Sidhnai Canal are, on the whole, in a very good condition, forming a handsome row of trees. The increase during the triennium has been on the Sidhnai Canal and Rájbahás. The result, on the whole, is satisfactory.

The expenditure for the three years under report was as follows :—

									Rs.
1893-94	...	...	...	...	...	...	...	...	2,338
1894-95	...	...	...	...	...	...	...	...	3,658
1895-96	...	...	...	...	...	...	...	...	2,640

The high expenditure during 1894-96 is due to expenditure incurred on the sowing of avenues along Rájbahás, and for their maintenance.

Receipts during the year 1893-94 amounted to Rs. 873-4-0, and have decreased from 1894-95, owing to the *sirkana*, which was the chief item of income, being removed from canal banks.

CHENAB SUB-DIVISION.

Improvements.—Nurseries suitable for plantations and avenues have been established at the Binda, Sargána, Ilampur, Billiwála, Jalálpur, Shujabad and Buch Canal chaukís. Similar works have been started at places on the Chenáb *band*. Wali Muhammad, Durána, Langána and Sikandarabad Canals.

The canal avenues have been extended during last year on the Gajjúhatta, Lower Bakhtuwáh and Jai *band* by nearly four miles.

An extension of one mile of *kíkar* trees has been effected on the Khadal Channel, and the increase in plantations during 1895-96 at the different chaukís, and on the canal banks amounts to 3.50 acres. This also includes the stocking of the Shujabad and Ilampur chauki gardens with fruit-trees.

Maintenance.—The groves of trees existing at the chauki gardens have been kept up and added to. There are wells at the following chaukís, Ilampur, Shujabad, Búch and Billiwála.

Kasba compound has been leased out to a cultivator living close by, who has undertaken to put down fresh trees and water regularly the existing ones.

Income.—The income for the triennial period under review amounts to Rs. 18,558-12-3, while the expenditure amounts to Rs. 3,342-5-6, or a surplus of Rs. 15,216-6-9, and is derived from the sale of the spontaneous growth along the canal banks.

Receipts are realised in the usual manner and credited to the local *Zar-i-nagha* Fund. The following is a statement of receipts and expenditure :—

Year.										Expenditure.	Receipts.
										Rs. a. p.	Rs. a. p.
1893-94	...	...	...	...	...	...	...	...	...	1,009 0 0	9,984 5 0
1894-95	...	...	...	...	...	...	...	...	...	1,109 5 6	4,360 13 6
1895-96	...	...	...	...	...	...	...	...	...	1,224 0 0	4,213 9 9

Sale of wood has not been so large in the years 1894-95 and 1895-96 as it was in the year 1893-94, hence the decrease in the years 1894-95 and 1895-96.

SUTLEJ SUB-DIVISION.

Avenues.—The arboricultural operations in this Sub-division are confined to avenues and plantations. The avenues comprise the growth on the spoil banks and berms of the canals, with an average length of 547 miles. The growth chiefly consists of *farásh kíkar*, *shísham*, *pílu* and a few dates. The growth is spontaneous. On new channels broadcast sowing has been tried on the berms, but with the exception of the Diwánwáh Division, which has a fair growth of *kíkar* and *farásh* springing up, the net results are nil: this is due to want of protection.

The principal operations are confined to the bridge sites and regulators, where *beldárs* are employed from six to twelve months; the banks are levelled off and hedged in with thorns; lines of young trees are planted, and as they progress the sites are enlarged. Most of these trees are *shísham* from root suckers and cuttings.

The following statement shows the the progress by count from 1893 to 1896 :—

Serial No.	Name of plantation.	Counted in June 1893.	Counted in July 1893.	Counted in March 1894.	Counted in April 1895.	Counted in April 1896.
1	Chauki at Lodhrán ...	513	541	541	554	528
2	" Mirānpur ...	183	199	199	273	369
3	" Jugguwāla ...	214	214	214	214	389
4	" Kureshewāla ...	210	210	210	190	212
5	" Haveli ...	433	433	433	367	380
6	" Karor ...	298	298	298	288	506
7	" Basantpur ...	12	12	12	92	114
8	" Khānpur ...	77	77	77	102	123
9	" Lāl Saggu ...	173	173	173	168	245
10	" Mitru ...	163	179	179	138	164
11	" Islām ...	97	97	97	141	204
12	" Mānpur ...	241	277	277	251	289
13	Bridge Mubārakwah ...	99	109	109	188	180
14	" Bahāwalwah Lodhrán ...	165	205	205	413	400
15	" Sardārwah ...	95	95	95	264	337
16	" Mahomedwah ...	108	108	108	159	159
17	" Jamwah Khurd ...	120	120	120	141	180
18	" Got Bahār ...	143	143	143	181	181
19	" Sultānwah ...	133	163	163	251	251
20	" Sultānwah Chimbhel ...	...	38	38	130	183
21	" Abbanwah Regulator ...	114	144	175	179	189
22	" Jāmwhā ...	97	127	156	175	175
23	" Syphu Maled ...	220	230	319	336	338
24	" Bah : Mahomed Regulator ...	118	118	118	102	106
25	" Gidarwah Regulator ...	132	132	132	145	143
26	" Mubārakpur Branch ...	28	28	28	50	33
26	" Jok Mangla ...	...	...	...	...	93
27	" Haveli Right Bank ...	...	...	...	...	92
	Total ...	4,186	4,470	4,619	5,492	6,563

Plantations.—These are confined to the chauki compounds, and 12 out of the 13 are fairly stocked with trees. The compound of the Chelewāhan chauki was taken over too late in the season to do anything to it. Nurseries are kept up at Lodhrán, Karor and Islām' chaukis, where water is available all the year round, for the supply of young plants which are constantly needed for renewals.

Revenue.—The revenue is derived from loppings, sale of reeds, grass and wood, and a small revenue from fruit. The sale of loppings shows the largest revenue, and wood next. The loppings are from the *kikār*, and are bought to feed goats and cattle at so much per tree, varying from 1 anna to 4 annas each. The reeds are purchased to make mats and ropes, but the species called *Suchha khāna* is decreasing, which is the most valuable, and is due to clearing the side slopes yearly.

The wood sales are mostly to our own contractors for burning bricks and lime. There are a few local purchases by *zamindārs* themselves. There are no outside sales. Contractors do not come forward, although our rates are only 9 Rs. per 100 cubic feet, and the railway pays Rs. 55 per 100, which would certainly give them a large profit, as the carriage would be very small.

The following is the statement of receipts and expenditure :—

Year.	Expenditure.			Receipts.		
	Rs.	a.	p.	Rs.	a.	p.
1893-94	1,778	11	8	3,361	5	4
1894-95.	1,772	7	8	2,781	7	10
1895-96	1,818	3	4	4,191	1	10

INDUS CANALS DIVISION.

Trees in this Division are hand watered throughout the year.

There is only one small nursery, as the planting out of trees has practically been given up.

As was mentioned in the triennial report of 1893, four canal chanki compounds are now classified as plantations. There has been no change in the area recorded since last report.

There are no groves in the Division.

Only one mile has been added to the length of avenues, and that in 1893-94, while 1·86 miles of avenues disappeared, or had to be cut down, on account of erosion by river action.

The fear of river erosion prevents any satisfactory extension of avenues. These consist nearly entirely of *shisham*, though at the tails of canals, where water is scarce, *kikar* trees are found. A few *Eucalyptus* trees are found in the Division.

The income has been increasing in a satisfactory manner. It has been found possible to use *shisham* from well-grown trees in various canal works. Fellings have come in useful for firewood.

Expenditure has been cut down, and is now chiefly limited to watering and tending the few trees planted out, and looking after the plantations in chauki compounds.

The income exceeded the expenditure in 1895-96, which is the first year such a result has been obtained. In 1893-94 income and expenditure nearly balanced, but there was a considerable falling-off of income in 1894-95.

MUZAFFARGARH CANALS DIVISION.

Nurseries.—During 1894-95 nurseries were started at the sites of all the canal rest-houses in the district. All, however, failed, due either to bad seed, or their not being properly tended, except that at Betwarián. The nurseries formerly existing at Adil shelter hut, Shujra and Vasandewála, have been discontinued. In the two former the trees have been planted out, while the last was destroyed by the floods of 1893.

Plantations.—The fruit-trees at Kálu and Sardár shelter huts, chiefly consisting of mangoes, are in a flourishing condition, but those at Vasandewála were destroyed by the floods of 1893. Plantations of *shisham* trees exist at Adil shelter hut and at Shujra and Betwarián rest-houses.

Groves.—No groves have yet been formed.

Avenues.—There is a good avenue of fair-sized *shisham* trees, about 5 miles in length, running due north from Shujra rest-house along the canal road. Otherwise avenues, as usually understood, do not exist. There are rows of trees along the Kinjar-Mahra band and along several canal banks.

The counting of trees having been discontinued, no figures can be given.

Income from arboriculture.—The figures represent the income derived from the sale of trees it was necessary to cut down, or of those which have died, or been blown down; also from sales of thinnings or loppings, and from sales of fruit.

Expenditure on arboriculture.—Represents cost of establishment kept up for the maintenance of plantations.

General remarks.—Owing to the low state of the *Zar-i-nagha* Fund in this district, due to heavy expenditure on flood protection works, no arboricultural works of any importance have been undertaken in recent years, and in the last year the plantation estimate was cut down to the lowest limit compatible with the maintenance of existing plantations. There are many excellent *shisham* trees in the district, for the growth of which the soil appears to be especially suited, and, in spite of the dryness of the climate, most trees when once established thrive well. Many miles of now treeless canals and embankments might, with proper attention and a moderate annual expenditure, have avenues or line trees established along them in a few years, were funds available.

KARNAL DIVISION, WESTERN JUMNA CANAL.

Avenues.—The trees which were planted on the right and left embankments at Tajewála were watered and maintained. Young *shisham* trees were planted on the left bank of the new supply channel to a distance of 1,400 feet. Trees on the Somb and Fattegharh bands were maintained, as well as on Dádapur, Kharwán, Buriya and the Circular roads. The trees on the Main Canal from Indri to Munák were maintained.

Eucalyptus seedlings and date-palms have been successfully grown at Jáni and Munák, and are in a flourishing condition. One hundred and fifty-five *Eucalyptus* seedlings were planted out at Jáni during the year 1895-96, and are thriving, as are 100 date-palm seedlings.

Ornamental gardens were maintained at Dádapur, Radaur, Jandhera, Munák, Jáni, Muána and Jínd.

About 8 miles of trees were planted on the Main Line, of which 2 miles have failed.

About 40 miles of trees were planted on the Main Line, Sirsa Branch, of which about 12 miles failed, owing to the inferior soil and other causes. The *tín* and *shisham* trees are in good condition. New gardens have been laid out and stocked at Mandwal and Pegan.

On the Habri Rájbaha 7.5 miles were planted with trees. About 3 miles failed, owing to the bad soil.

A good number of fruit-trees of different kinds have been planted in the gardens at Barthal, Badhera, Kaul and Ror Májra chauki compounds, and are in a very flourishing condition everywhere, except at Kaul, where many of the trees have dried up.

These fruit-trees will bear fruit next year.

Nurseries.—Nurseries were established at Tájewála and Dádupur, which supplied plants to the new supply channel at Tájewála, Jaidhri plantation, &c.

During February and March, 1896, nurseries of *shisham* were established at Karnál, Ghogripur, Munák and Jáni.

At Mandwál a portion of the Mandwál chauki compound has been laid out as a nursery and sown with *ním* and *tún* seed.

All the *shisham* seedlings at Barthal have been transplanted on the Sirsa Branch. The plants of *shisham* and *jáman* from the plantation nurseries at Badhera have mostly been planted out on the Sirsa Branch and the Habri Rájbaha. The remaining plants will be put out during next rains.

The nurseries of *jáman* and *shisham* at Kaul chauki have also been planted out in the Kaul chauki compound and on the banks of the Sirsa Branch.

Plantation.—Some trees were planted on the Circular and Kharwán roads Buriya Nali, and on the left bank of the Main Canal, and are doing well.

Trees were planted on the Main Line, Sirsa Branch, and Habri Rájbaha. A large area, along with the plantation, has been transferred to the Civil Authorities.

Financial results.—The sale-proceeds from canal plantations during the three years are shown below :—

								Rs.
1893-94	...	...	...	...	...	...	...	3,810
1894-95	...	...	...	...	...	...	...	555
1895-96	...	...	...	...	...	...	...	2,826
								<u>7,191</u>

against the following expenditure :—

1893-94	...	...	...	...	...	...	...	7,557
1894-95	...	...	...	...	...	...	...	5,035
1895-96	...	...	...	...	...	...	...	5,390
								<u>17,982</u>

The above figures show a deficit of Rs. 10,791, which is chiefly due to the Sirsa Branch, which is being planted with trees, and from which no receipts are derived as yet.

DELHI DIVISION, WESTERN JUMNA CANAL.

Nurseries.—During the years under review new nurseries have been established at different places throughout the Division, out of which a good number of trees has been transplanted to the canal banks and chauki compounds. The plants which remain in the nurseries are in good condition, and suitable for transplantation, with the exception of a few which have become too large : these will be left where they are.

No new nurseries have been started, as they are not required at present.

Plantations.—The *shisham* trees which were planted during 1892-93 on the right bank between R. D. 19,000 to 22,000, Delhi Branch, having failed, the same area was sown with *kíkar*, and was doing well till recently, when a part was damaged by fire. Its recovery will depend on next rains.

Kíkar seed, sown on the trench system, germinated, but the seedlings died off in the hot weather. In protected reaches self-sown seedlings have sprung up, and are in a flourishing condition.

A large quantity of fuel has been used for various purposes, so that, what with failures and clearances by felling, the increase in the area under plantations is practically nil.

Groves.—This item has altogether been done away with, in accordance with Chief Engineer's instructions, conveyed in his Circular No. 75-5451-I, dated 28th December, 1891.

Avenues.—Very fair progress has been made on the whole. There is a tendency to plant out trees which are too young, and failures are invariably due to this cause.

Income and expenditure.—The income exceeds considerably the expenditure. Income comes under four main heads—Grass, fruits, fuel and timber. The receipts for grass and fruits show no great increase. The receipts on account of fuel and timber show an increase of over Rs. 12,000. It is improbable that this increase will be maintained, as it is entirely due to the large quantity of fuel used on canal works, which are now approaching completion.

HISSAR DIVISION, WESTERN JUMNA CANAL.

Nurseries.—In the Narwána Sub-division 1·25 acres of *shisham* slips were planted out on canal banks during the three years, and the remaining 5 acres of nurseries are flourishing, and will be planted out during next rains. The four nurseries in the Gorakhpur Sub-division are in a thriving condition, and 4 acres were planted out during the last year, leaving 4 acres still to be planted out. In the Sirsa Sub-division there are also 4 acres to be planted out during the rains.

Plantations.—During the three years now reported on, 4 acres were stocked in the Sirsa Sub-division, 40 acres in Narwána and 81·75 acres in Gorakhpur. In Patiála they consist entirely of *kikar*, and are in a flourishing condition; this is also the case with the plantations in the Gorakhpur Sub-division. The plantations in the Sirsa Sub-division were commenced only in 1894.

Avenues.—In the Sirsa Sub-division 5 miles of avenue were planted during 1895-96, which are alive, but those planted on the Main Line have failed, owing to their being put in too small: there were 2 miles of them that failed thus. In the Gorakhpur Sub-division good progress was made, some 11·5 miles of avenue having been planted out during the triennial period, and the existing avenues in Narwána are in a splendid condition.

None of the new plantations have yet commenced to bring in any income, but the income from the Hansi Branch plantations has been very considerable, and amounts to Rs. 14,799 for the triennial period, as against a total expenditure in maintenance and extension of Rs. 2,749 for the same period.

FEROZEPUR DIVISION, SIRHIND CANAL.

Nurseries.—At the beginning of the triennial period the area under nurseries was 1·86 acres. An area of 4·93 acres was added, and 2·43 acres failed, leaving an area of 2·43 acres at the end of the period under nurseries.

Plantations.—The area under plantations at the beginning of the triennial period was 1984·59 acres; at the close of the three years under report the area had increased to 2275·97 acres, which gives an increase of 291·38 acres. Of this amount, 242·35 acres were added during the first year (1893-94). A plantation of 92 acres was sown in the Abohar, and 72·5 acres in the Bhatinda reservoirs. Of the balance, 77·85 acres, an area of 51·6 acres was planted out at miles 90 to 97 on the Abohar Branch, in the Asabutar Sub-division, 13·5 in Gholia, and the rest in the Alamwála Sub-division. The progress during the last two years has been small, as sufficient funds were not available, and the principal work done has been the maintenance of existing plantations. The figures in columns 5 and 6 for 1895-96 are principally transfers from one Sub-division to another, due to modifications in Sub-divisional charges. In the Bhatinda Sub-division an area of 18·3 acres was planted out at miles 86 to 88, and 90 of the Bhatinda Branch. The plantations consist principally of *shisham* and *kikar* trees, with fruit plantations at some of the canal chaukis.

Groves.—There are no groves. The area formerly shown under this head was transferred to plantations in 1889-90.

Avenues.—There has been very little progress in the extension of avenues. The length shown at the beginning of the triennial period was 58·20 miles, but this was wrong, and has now been corrected by making necessary additions in column 5. The actual length at the beginning of the triennial period ought to have been shown as $58·20 + 96·57 + 1·60$ for 1893-94 = 156·37 miles. To this a length of 2·88 miles has been added in Gholia Sub-division, 6 in Asabutar and 1 in Bhatinda, bringing up the total at the end of the period to 159·45 miles, after making the deductions shown in column No. 5.

Income and expenditure.—The total income for the three years has been Rs. 9,730, giving an annual average of Rs. 3,243, against 2,602 for the previous years. The income has been derived principally from grazing leases. The trees are still young, and, besides, there is little or no demand for fuel in the district.

The expenditure for the three years has been Rs. 30,014, which gives an annual average of Rs. 10,005, against Rs. 11,987 for the three previous years. The excess of expenditure over income is Rs. 6,762, against Rs. 9,384 in the previous triennial period. It will, therefore, be seen that there is a marked decrease in the excess of expenditure over income.

LUDHIANA DIVISION, SIRHIND CANAL.

Nurseries.—During the period under review there is a decrease of 4.13 acres under this head on the Main Line and Combined Branch. On the Abohar and Bhatinda Branches there was little or no increase, and the areas are more or less stationary. There are now 13.38 acres occupied as nurseries in the Division, while in the previous three years the figures stood at 17.51.

The alternate abandonment and starting of nurseries on the two latter branches have about counterbalanced in the above period. On the Main Line such areas are not much in demand, the carriage of plants from one site by water being both feasible and cheap.

Plantations.—There was a total increase of 101.53 acres during the period on Main Line, Abohar and Bhatinda Branches. This added to previous years' figures gives a total area of 4,540.05 acres under plantations, out of 6,608 acres available for that purpose.

The progress shown on the Main Line is 50.0 acres, and that part of the canal is now fairly stocked with trees, in all places where the soil allows of their being easily matured.

The Combined Branch is a short channel and not well suited for extensive plantations. There are a fair number of trees, which grow slowly, the soil being unfavorable.

On the Abohar Branch an increase of 36.95 acres is recorded: the operations are mostly confined to silting reaches, where the results are generally satisfactory.

The Bhatinda Branch passes through the "very dry" and "arid" zones, and the cultivation of trees on it is consequently precarious, unless canal water is easily obtainable. Progress is slow in the lower reaches, yet steady, and the increase reported for 1893—96 of 14.52 acres is satisfactory.

On both of the two latter branches felling and thinning operations have to be suspended for the present, and no revenue is likely to be obtained for some years from these sources.

Groves.—There are none in the Division.

Avenues.—The total length of avenue last reported was 191.65 miles, to which the period under review has added 26.50 miles, making a total of 218.15 miles so protected. The increase is distributed as follows:—

						Miles.
Main Line	...	...	...	...	...	12
Combined Branch	...	...	...	...	...	2
Abohar Branch	...	...	...	...	...	7.10
Bhatinda Branch	...	...	...	...	...	5.40
						26.50

Mangoes and *jáman* are the varieties mostly planted on the Main Line, *jáman* and *shisham* on the others. The avenues are generally watered by stream wheels, or from the notches of falls, and are in consequence successful and promising.

Receipts and expenditure.—The receipts and expenditure are best shown together for the sake of comparison. The table below gives details for each of the three years:—

Year.								Receipts.	Expenditure.	Profit.
								Rs.	Rs.	Rs.
1893-94	...	...	...	...	...	...	...	15,327	6,510	8,817
1894-95	...	...	...	...	...	...	...	8,263	7,018	1,245
1895-96	...	...	...	...	...	...	...	13,214	7,317	5,897
Total								36,804	20,845	15,959
Average								12,268	6,948	5,320

The average profit thus works out to Rs. 5,320 per year, compared with Rs. 8,800 of the previous triennial period. The decrease is attributable to slacker demand for fuel (for manufacture of building materials, &c.), and to the non-inclusion of grazing receipts in the year 1894-95, the dates of sale having been altered from March to April.

Of the receipts, Rs. 13,401 represent fuel cut from plantations; Rs. 23,132 represent canal produce, grass, &c.; Rs. 271 represent sale of dead trees, &c.

The receipts and expenditure are given below by Branches :—

Branch.							Receipts.	Expenditure.	Profit.
							Rs.	Rs.	Rs.
Main Line	...	...	...	...	...	...	19,014	6,430	12,584
Combined Branch	...	...	...	...	...	...	186	376	—190
Abohar	...	...	...	...	...	...	9,682	5,049	4,633
Bhatinda	...	...	...	...	...	...	7,922	8,990	—1,068
Total							36,804	20,845	15,959
Average							12,268	6,948	5,320

The Main Line and Abohar Branch contribute solely to the revenue derived, while the Combined Branch and Bhatinda Branch are, for reasons given above, unable to show steady profits.

PATIALA DIVISION, SIRHIND CANAL.

Nurseries.—The area under nurseries has somewhat decreased, from 7.79 to 6.78 acres, owing to 1.27 acres having been transferred to plantations. A small addition was made in favourable spots in 1895-96. The stock of young plants was considerably reduced in the two previous years by being sent out to avenues and plantations, but fresh sowings have been made, which will make up for the seedlings transplanted. The keeping up of a full stock of young seedlings, suitable for transplanting, will receive very careful attention in the future, as on this depend the completion of new avenues, and also the filling up of gaps, where trees have died in old avenues.

Plantations.—The area taken up for plantations has increased from 3,851.88 to 3,918.48 acres, i.e., by 53.07 acres, owing to the inclusion of 51.80 acres of levelled silt reaches, and 1.27 acres transferred from nurseries. The soil of the levelled silt reaches is most favorable for the raising of plantations, and the new areas have been lately sown with *shisham* and *kikar*, and will be carefully maintained.

The total stocked area of plantations in the Division now amounts to 2,538.19 acres, as against 2,485.12 at the beginning of the period under review.

As a rule the plantations are in good order. This is especially so on the First Feeder and the Kotla Branch, where the *shisham* plantations are doing excellently.

On the Ghaggar Branch, towards the tail, there are fine stocks of *kikar*, which are, however, getting somewhat damaged by the inroads of an insect, which is difficult to discover. Large healthy trees in the midst of a plantation are found to die without any ostensible cause, but if the bark be removed, the burrowings of an insect will be found on the surface of the wood. Cutting down of affected trees has been occasionally resorted to, to prevent further spread of the evil.

There is, however, at present no local demand for the timber, even as fuel, but on the completion of the Southern Punjab Railway, a demand will probably spring up, when the dead trees may be disposed of quickly and at considerable profit to the canal.

On the Second Feeder the plantations are still of small growth, but particular attention is being directed to this portion of the canal.

On the Choa Branch the land is very sandy, and, generally speaking, the level of the canal water is much below the ground surface; hence plantations are not laid out on this Branch, only avenues being maintained.

It may be mentioned that at the Kot Bakhtu Canal chauki, at the tail of the Kotla Branch, there is a very successful grove of Arabian date-palms. These have been grown from seeds, and are doing very well on the whole, some of the trees having attained a height of 7 or 8 feet, and are already flowering.

Groves.—There are no groves now in this Division.

Avenues.—The total length of avenues has increased during the period under review from 114.69 to 128.64 miles, or by 13.95 miles. A portion of this increase is, however, only nominal, as there appears to have been an error in the actual number of miles previously shown under the Ghaggar Branch, which is now rectified.

The avenues have, on the whole, done well, especially on the First Feeder and the Kotla Branch, where they have been extremely well cared for. There were 2·70 miles of failures, of which 2·00 miles were on the Second Feeder and Ghaggar Branch, due to the dryness of last year, and less care in the selection of plants and planting operations. Special attention is being directed to the completion of avenues on the Second and Third Feeders and Ghaggar Branch, which are the most backward parts of the Division.

Income.—The gross profits for the last three years, as compared with those of the previous triennium, are as follows:—

	Rs.
Three years ending 1892-93	14,651
Ditto 1895-96	9,691

This shows a falling-off of Rs. 4,960, which is chiefly due to very much less fuel having being sold for brick-burning purposes during the past three years. The actual figures on the item of plantations (which are the source of the fuel) are Rs. 5,677 and Rs. 1,794 for the two periods, respectively.

The receipts under miscellaneous (chiefly grass) also show a falling-off, due, perhaps, to the fact that the previous period included the dry years 1890-91 and 1891-92, when grass was very valuable and realised high prices.

Expenditure.—There has been a great decrease in expenditure, as anticipated in the previous triennial report, as will be seen from the following figures:—

	Rs.
Period ending 1892-93	40,691
Ditto 1895-96	22,576
Or less by	18,115

The principal sub-heads in which there has been a decrease are nurseries, and groves and avenues. The operations are now on a smaller scale, and maintenance of existing plantations and avenues account for most of the expenditure.

General remarks.—Although a large proportion of the land attached to the canal is well stocked with plantations, and more than half the total length of the various channels is lined with avenues, arboricultural operations must go on for some years longer, to maintain the young plantations and avenues, to plant out fresh areas of bare land, where practicable, and to complete the avenues throughout the entire length of the canal, where the soil is at all suitable.

CHENAB CIRCLE.

Rainfall.—Generally, the three years were successively very rainy, rainy and very dry.

Nurseries.—These have received little attention, as the system of sowing out in trenches is found to answer best.

Avenues.—These have been largely extended in the Swát River Canal Division, and in the 1st and 2nd Divisions, Chenáb Canal. As just stated, the system which costs least, and answers best, is to sow the seed (usually *shisham*) on the margin of small trenches, down which water is run. Under this system the young trees are found to attain a height of from 2 feet to 8 feet, or even 10 feet, in one year, the average being 4 feet to 5 feet. This system has been most successful on the Swát River and Chenáb Canals.

Groves.—The statement of these is blank.

Plantations.—These have not been extended very largely, but increased attention is now being given to the matter. The intensely dry character of the soil in the Chenáb Bár makes it impossible to grow plantations without a copious water-supply.

Lyallpur Station.—A good deal has been done during the past year in laying out avenues in Lyallpur Station, and these have all been sown on the trench system.

Income and expenditure.—As the establishing of avenues on the Swát River and Chenáb Canal has only been commenced in recent years, expenditure must exceed income for many years to come.

Shahpur Canal Division.—This Division has only been constituted for two years, and the tabular statements relating to it are only given for the years 1894-95 and 1895-96.

SHAHPUR INUNDATION CANALS DIVISION.

Nurseries.—Nil.

Plantations.—No areas are available for plantations.

Groves.—There are no groves in this Division.

Avenues.—There are no avenues in this Division, properly so-called; those shown in the statement are common country trees, spontaneously grown, which, for the most part, line the banks of the canals. They consist almost entirely of *kikar*, tamarisk, *skisham*, with a few others.

Income.—The income is derived principally from sale of fallen and dry trees, and trees cut down within 10 feet of the edge of the channel; sale of grass on canal banks for grazing purposes; and *munj* and *sarkanda* reeds, which grow spontaneously.

Expenditure.—The expenditure incurred has been almost entirely on maintaining and repairing the existing avenues. There is no record of such expenditure during the years prior to 1895-96.

This is the first Triennial Report of this Canal Division. As it has been in existence only two years, the report shows only figures for the two years 1894-95 and 1895-96. Before then the canals were under district management, and any report on their trees would have been included in the General District Report.

ROHTAK INDEPENDENT SUB-DIVISION, WESTERN JUMNA CANAL.

This Sub-division was sanctioned with effect from 1st February, 1895, about which date the Bhiwani Rájba system was commenced.

Up to the 31st March, 1896, no arboriculture operations were undertaken on the Bhiwani Rájba system, the main channels of which are shown on the accompanying skeleton plan in blue lines.

These channels have now been completed, and it is proposed during 1896-97 to start nurseries at Rindhawa, Bainsi and Chang chaukis, with a view to putting down line trees along the toe of outer slopes of the banks of the Bhiwani Rájba, and of the Kanhaury Maham and Rewari Branches.

A small space in the compound of the new Sub-Divisional quarters at Rohtak may also be set aside for a plantation during 1896. The returns for the triennial period ending 31st March, 1896, are blank.

PROVINCIAL DIVISIONS.

HAZARA PROVINCIAL DIVISION.

Nurseries.—Practically, the progress under this head has been *nil*; the total area taken up for nurseries during the three years under report throughout the Division was 2·57 acres, and 2·90 acres were abandoned.

This is chiefly due to the fact that the roads are stocked with trees, and there is very little demand for young trees.

Avenues.—Good progress has been made in the maintenance of roadside trees, which are mostly in a flourishing condition. The failures occurred in places where no constant watch could be kept, the young trees being destroyed by sheep, goats, camels, &c.

Income.—During the period under report the total income amounted to Rs. 2,803, which represents the sale of live and dead trees, loppings, grass, &c.

Expenditure.—The gross expenditure on arboriculture during the period under review amounted to Rs. 17,439.

The net expenditure thus amounts to Rs. 14,636.

RAWALPINDI PROVINCIAL DIVISION.

RAWALPINDI SUB-DIVISION.

Rainfall.—The rainfall has been as follows:—

								Inches.
1893-94	...	...	...	...	...	...	...	54·47
1894-95	...	...	...	...	...	...	...	38·37
1895-96	...	...	...	...	...	...	...	27·95

The past year has been excessively dry.

For arboricultural purposes the Rawalpindi Sub-division comprises 95 miles of the Lahore and Peshawar road, 14 miles of the Rawalpindi-Baracow road, $\frac{1}{2}$ mile of Lawrencepur Link road, 4·16 miles of Hazro-Hatti road, $\frac{1}{2}$ mile of Gujar Khan and Mandra Link roads, and 67 miles of Turnoul and Khushalgarh road.

On these roads there are three distinct kinds of arboriculture, viz., nurseries, avenues and groves.

Nurseries.—The nurseries are nearly all located in the compounds of the rest-houses. During the last three years, 37 acre were planted and 18 acre were used up in forming groves and avenues. The difference, 19 acre, represents the addition to nurseries. All the young plants in these nurseries are flourishing, and there will be a sufficient stock in hand for establishing about 10 miles of avenues next year, if funds can be provided.

Avenues.—On the trunk roads trees to form avenues have been planted, outside the formation width, parallel to the road.

During the three years under review 7.51 miles of trees were planted on roads in the Ráwalpindi district. Nearly all these young trees were obtained from the nurseries in rest-house compounds.

About 3.32 miles of trees failed, owing to excessive drought, during the last two years. The progress, therefore, on avenues during these three years shows an increase of only 4.19 miles.

Groves.—Groves are established at intervals of about three miles on the Lahore and Pesháwar road and Ráwalpindi-Baracow road, where the soil is suitable.

There has been an addition of 8.52 acres to the groves on the Lahore and Pesháwar road during the past three years. In 1893-94 19.28 acres of groves were used up as follows: destroyed by floods 10.5 acres, and transferred to Military Department 8.78 acres. During 1895-96, 1.30 acres have failed, owing to excessive drought.

Therefore, on the whole, there has been a loss of $20.58 - 8.52 = 12.06$ acres, of which 8.78 acres are not a loss, but a transfer.

Expenditure and revenue.—During the past three years Rs. 8,168 have been spent on arboricultural operations in this district, and the revenue realised amounts to Rs. 5,365: difference Rs. 2,803.

JHELM SUB-DIVISION.

Rainfall.—The year 1895-96 was unusually dry, the total rainfall being only 17.70 inches, compared with 50.49 inches in 1893-94 and 42.72 inches in 1894-95.

Avenues.—During 1893-94 arboricultural operations were confined to replacing young trees, here and there on the roadside, that had died or been destroyed. During 1894-95 about 2 miles of the Lahore and Pesháwar road were provided with double lines of avenues of young *shisham* trees, but hardly anything could be done in the last year, owing to the unusual drought.

Over 22 miles of the Lahore and Pesháwar road are now stocked with avenues.

Groves.—The total area of groves on the Lahore and Pesháwar road is, as previously reported, 91.90 acres, of which about 76.81 acres are now fully stocked with trees. There are blanks in the groves, which require filling in with young trees. This work can be taken in hand, only as funds become available.

Nurseries.—The roadside nurseries are thriving, and are sufficient to meet the ordinary requirements of the road.

Revenue.—The revenue realised by the sale of grass and dead trees during the past three years amounts to Rs. 2,509, against Rs. 1,865 in the previous three years, showing an increase of nearly Rs. 600.

Expenditure.—The expenditure incurred on arboricultural operations during the three years under review amounts to Rs. 5,426, against Rs. 8,457 in the previous three years, showing a reduction of over Rs. 3,000.

The expenditure has exceeded the revenue by Rs. 2,917.

KOHAT PROVINCIAL DIVISION.

Nurseries.—Attempts have been made during the last three years to plant nurseries at various places along the road. There has been fair success, but the scarcity of water and the general sterility of the soil are great drawbacks.

Plantations.—There are none in the Division.

Groves.—These have thriven fairly well during the past three years, but bad soil and want of water will always militate against any marked success.

Avenues.—Trees in avenues are progressing fairly well, but slowly. In a frontier Division like Kohát it is difficult to make much progress. Trans-border men seem to consider that the trees are planted for the use of their animals, and much damage is done yearly by camels, &c., browsing on the roadside trees. Want of water and bad soil also preclude any great success. *Shisham*, willow, mulberry, *kikar* and *pípal* trees have been planted, and the mulberry seems to thrive best of the lot.

Expenditure and income.—The expenditure during the last three years has been Rs. 7,084-7-1, while the income has only been Rs. 43-3-0. All the trees in the Division are young, and no proceeds can be obtained, except for some small amount of loppings and a little grass.

It will be very many years before any substantial income is received. The soil all over the district is very poor, and water is scarce.

GUJRANWALA PROVINCIAL DIVISION.

GUJRANWALA SUB-DIVISION.

The only roads under the Public Works Department in the Gujranwála district on which trees are planted are—

Lahore and Pesháwar road from mile 21½ to 62½ in Gujranwála district, including two link roads, one leading from mile 29 on the Grand Trunk road to Kámoki railway station, and the other from mile 51 near Ghakkar to the railway station, about 1½ miles in length.

The Wazírabad and Siálkot road in Gujranwála district, 5½ miles.

The maps attached to this report show the avenues and groves that are fully or partially planted with trees. Lots of young trees were planted along the outer edges of the berms of roads, but the great number of them was eaten up by white ants. The remaining plants were taken proper care of, and have generally grown satisfactorily. A list of the trees standing along the roadsides is annexed. The plants are *shísham*, *kíkar*, and *sharin*. No effort was made to plant more trees, owing to the want of sufficient establishment.

The trees in nurseries at Wazírabad and Ghakkar, transplanted on the roadside, were given up, owing to want of funds and the bad soil.

Along the Wazírabad and Siálkot road no efforts were made to plant more trees, or to form nurseries, owing to want of sufficient funds. Only those which were formerly planted have been taken care of.

GUJRAT SUB-DIVISION.

The chief roads and places suitable for arboricultural operations in the Gujrat Sub-division were given in the last triennial report.

I.—*Grand Trunk road.*—The avenues, groves and nurseries on this road are shown in the tracing attached to this report.

The road is planted partly with trees and partly with young plants.

The trees are mostly *kíkar*, but there are also *shísham* trees and young plants, which have been put out along the outer edge of the berms, on both sides of the metalled portion. Every year young plants of *shísham* are transplanted to roadsides, and watered, protected and taken care of by the *mális* employed for this purpose.

In 1893-94 and 1894-95 250 *shísham* trees were planted out on the roadside at mile 66, and in 1894-95 and 1895-96 at miles 77, 83, 85 and 86. They were all watered, protected and taken care of. *Shísham* trees at miles 74 and 86 are transferred from list of young plants to stock.

Some failures occurred, where very young and tender plants had been planted out, but the dead ones were again replaced by new ones, except at mile 92, where the ground is unfit for the proper growth of *shísham* trees.

It has been found by experience that the transplantation of plants, above 4 feet in height, is very successful, and that their progress is very satisfactory; whereas small plants, 1 or 2 feet high, require a long time to establish themselves, and a great deal of money is uselessly spent. Besides, there is a great chance of their dying, or being damaged.

II.—*Branch road.*—On this road there are avenues of *shísham* trees, which are protected and taken care of. They are almost all mature, and whenever any of them die, they are replaced by new ones from the nurseries.

III.—On roads, leading to rest-houses, there are partly grown-up trees, and partly young plants, which are taken care of by the road coolies.

IV.—*Bhimber band.*—On this band at first there were no trees at all, but gradually reeds, *farásh* and willow trees were planted, and then *shísham*, *pípal*, *tún* and *bér* trees, which have grown well. On the Grand Trunk road there are no nurseries, except in the compounds of Gujrat and Lála Músa rest-houses, which are enlarged every year by sowing new seed, but, at the same time, young plants are removed from them to roadsides. There are no ornamental gardens in this Sub-division. In Gujrat and Kathála rest-house there are some fruit-trees, which are taken care of.

JULLUNDUR PROVINCIAL DIVISION.

Rainfall.—It will be seen from Statement No. I that the rainfall has been insufficient during the years under report in the Jullundur, Hoshiárpur and Kángra districts of this Division, being, respectively, 16·40, 29·12 and 124·83 inches.

The establishment employed to water the roadside trees had, in consequence, to be temporarily increased.

Nurseries.—There are four nurseries in this Division, with an aggregate area of 1·881 acres. This is sufficient for the requirements of the Division.

Plantations.—There are no plantations in this Division.

Groves.—There were 5·25 acres under groves at the beginning of the year, and no changes of area have taken place.

Avenues.—The following are the roads in this Division :—

I.—Grand Trunk road from Phillour to left bank of Beás, 50·37 miles, of which 50 miles are suitable for avenues.

II.—Jullundur-Hoshiárpur road, 25 miles, of which 24 miles are suitable for avenues.

III.—Hoshiárpur-Dharamsála road, 80 miles. This road runs through the hills for the most part, and only 5·58 miles are suitable for avenues (*vide* Statement No. V).

IV.—Kángra Valley cart-road (including branch road), 67 miles. This road also runs through the hills; but, as a rule, through a better country than the foregoing one.

There are 65 miles suitable for avenues, and of these 18·459 are planted.

Income.—The income from the several sub-heads of arboriculture, realised and credited to Government as Provincial receipts during the year, amounted to Rs. 7,779, against Rs. 1,883 and Rs. 6,476 in the two preceding years. The increase in income during the year is due to better arrangements made for disposing of the produce.

Expenditure.—The total expenditure on arboriculture during the year amounts to Rs. 1,492, as compared with Rs. 1,857 and Rs. 1,961 in the two preceding years.

INDEPENDENT EXECUTIVE CHARGE, FEROZEPORE.

Rainfall.—The rainfall during the three years is shown in Statement No. I. It will be seen that the rainfall during the year under report has been insufficient both in the Ferozepore and Ludhiána districts.

2. The rainfall has been obtained from the office of the Deputy Commissioners, Ferozepore and Ludhiána.

Nurseries.—There are five nurseries in this charge, having an aggregate area of 1·22 acres (*vide* Statement No. II). These nurseries are sufficient for the requirements of both the Ludhiána and Ferozepore Sub-divisions in this charge.

Plantations.—There are no plantations in this charge.

Groves.—There were 496·41 acres under groves at the beginning of the year. The amount is still the same.

Avenues.—The following are the roads in this charge :—

I.—Grand Trunk road from Khanna to Sutlej, mile 162 to 195 = 37 miles, the whole of which is suitable for avenues.

II.—Ludhiána and Ferozepore road section from Ludhiána to Jagraon, mile 191 to 219 = 28 miles, the whole of which is suitable for avenues. Ludhiána-Ferozepore road section from mile 220 to 273 = 53 miles, of which only 32·83 miles are suitable for avenues.

III.—Ferozepore station roads, 2·26 miles. The total length of these roads, 2·26 miles, is suitable for avenues.

Income.—The income from the several sub-heads, realised and credited to Government as Provincial receipts during the year, amounted to Rs. 2,002, against Rs. 1,622 and Rs. 4,617 in the preceding years.

Expenditure.—The total expenditure on the several sub-heads of arboriculture in this charge during the year amounts to Rs. 1,507, as compared with Rs. 2,133 and Rs. 2,586 in the two preceding years.

SIMLA PROVINCIAL DIVISION.

Rainfall.—The actual rainfall of last official year is less by 33·20 inches than that of the preceding year, but it exceeds that of 1893-94 by 1·15 inches. The rainfall has been taken from the *Punjab Gazette*.

Nurseries.—There is no regular nursery planting in this Division.

Plantations and groves.—There are no regular plantations or groves in this Division.

About 1,300 trees which were planted before 1893-94 exist on the hillsides above the Army Head-quarters and the Military Secretariat offices at Simla, but these do not increase the area of such groves. Besides, these trees would come within the Municipal limits of Simla, a report on which is presumably submitted by the Deputy Commissioner. Before 1893-94 some sites of dismantled houses on Prospect Hill were planted out with shrubs, and the place made into a pleasure-ground.

Avenues.—There are no regular arboriculture operations in the Simla Provincial Division. The Hindustán-Thibet and the Kálka-Simla roads pass through Native States. The only portion over which the Executive Engineer is supposed to have any control is a strip, 100 feet wide, on each side of the road, but he has no control at all over the planting of this.

Every endeavour is being made to encourage young trees to grow at the following places:—*

1. "Barnes Court."
2. "Ellerslie."
3. "Benmore."
4. "Winterfield."
5. Koti landslips, miles 6th, 7th and 8th, Kálka-Simla cart-road.
6. "Viceregal Lodge."
7. "Prospect Hill."
8. Foreign Office.
9. Army Head-quarters.
10. "Snowdon Estate."
11. "The Retreat" at Mashobra.
12. Branch cart-road to railway station, Kálka.

Income.—The Ornamental gardens, under the charge of this Division, are situated at the places detailed in Statement No. VI.

There has been no income from arboricultural operations during the year under report.

Expenditure.—Rupees 6,053 is the total expenditure incurred as below:—

	1893-94.	1894-95.	1895-96.
	Rs.	Rs. a. p.	Rs. a. p.
Maintenance of garden, "Barnes Court" ...	338	337 12 6	338 10 9
Do. do. "Ellerslie" ...	212	151 12 0	119 0 0
Do. do. "Benmore" ...	211	201 9 3	128 13 0
Do. do. "Winterfield" ...	96	96 0 0	...
Do. do. "Viceregal Lodge" ...	3,058	3,014 4 1	3,000 12 4
Heating the Green House at "Viceregal Lodge" ...	...	...	300 1 0
Rebuilding a retaining wall in Circular garden at "Viceregal Lodge" ...	...	...	189 3 2
Annual repairs to covered Tennis Court at "Viceregal Lodge" ...	...	...	200 9 9
Converting the gravel Tennis Court at "The Retreat," at Mashobra, into a grass plot ...	...	...	190 6 8
Maintenance of garden on Prospect Hill ...	327	303 7 2	249 7 0
Do. do. at Foreign Office ...	96	96 0 0	...
Do. do. „ Army Head-quarters ...	180	180 0 0	...
Excavation to form a flower garden at "Snowdon" ...	...	195 3 0	...
Relaying conservatory roof at "Snowdon" ...	...	...	152 4 0
Maintenance of garden at "Snowdon" ...	...	...	330 0 0
Planting trees along sides of branch cart-road to railway station, Kálka ...	...	...	*233 11 9
Maintenance of 7th mile landslip, Kálka-Simla cart-road ...	...	...	620 0 0
Total ...	4,518	4,576 0 0	6,053 0 0

Map of district.—As no regular arboricultural operations are going on in this Division, the map, called for in paragraph 11 of the "Instructions" for the preparation of triennial reports and annual statements, is not necessary.

* Estimate was sanctioned for Rs. 330, and the total expenditure incurred amounted to Rs. 333-11-9, which included a sum of Rs. 100, being cost of repairs to the road; hence the correct expenditure incurred in tree-planting, viz., Rs. 233-11-9, has been accounted for.

AMBALA PROVINCIAL DIVISION.

Nurseries.—There were no nurseries in this Division, except during the year 1895-96, when the total area was 1·33 acres, of which ·26 acre failed for want of rain, and 0·11 acre were transplanted, leaving a balance of ·96 acre at the end of the year.

Plantations and groves.—There are no plantations or groves in this Division.

Grand Trunk road.—From mile 39 to 161 = 123 miles. This road runs through the Karnál and Ambala districts.

The following miles of this road, being within the boundary of the Ambala Cantonment, are under the charge of the Executive Engineer, Ambala Military Works Division: mile 119 = 2,337 running feet; mile 120; mile 121; mile 122; mile 123 = 1,251 running feet; total 3 miles, 3,588 running feet, or 3·68 miles altogether.

Patches aggregating 4·54 miles failed in the Karnál district, owing to want of rain.

Ambala and Kálka road.—This road (from 4th to 38th mile) is 34·63 miles long, and the length available for avenues is 33·97 miles; the aggregate width of the Ghaggar river, and the Jhujra and Sukhna crossings, which cross this road at miles 21½, 36½ and 32½, respectively, is = 0·66 miles.

Shahábad and Jagádhri road.—The length of this road from Shahábad to the west bank of the Jumna river, near Jagádhri, is 33·50 miles. This includes 10½ miles of the Adhowa and Kharindwa Railway feeder road. The railway station for Shahábad is called "Kharindwa." The length suitable of avenue is the entire length of road, i.e., 33·50 miles, thus—

	Miles.
Kharindwa to Adhowa Railway feeder road	10·50
Adhowa to Jagádhri (west bank of Jumna river)	23·00
Total	<u>33·50</u>

New approach roads, Karnál district.—The length of approach roads in the Karnál district, suitable of avenue, is 3·26 miles, one mile of which was planted during 1895-96.

Income.—An income of Rs. 7,831 was realised, against Rs. 5,832 and Rs. 4,891 in the two preceding years, on account of the sale-proceeds of dead and fallen trees, grass and fruits of the roads under charge of this Division.

The income from grass would have been greater, had not the grass, along the Grand Trunk road from mile 108 to 133, and Umballa and Kálka road from mile 4th to 14th, been given free to the 10th Bengal Lancers and 18th Hussars and Royal Artillery by order of Government in the Public Works Department.

Expenditure.—The amount of Rs. 1,541, against Rs. 1,892 and Rs. 2,316 in the two previous years, was expended on the maintenance of avenues during 1895-96. Thus the net income during the triennial period amounts to Rs. 12,805.

DELHI PROVINCIAL DIVISION.

Nurseries.—There are no nurseries in this Division. The reason for their absence is that young trees of a size suitable for plantation on roadsides can be had almost everywhere at a reasonable cost, and it is considered more expensive to grow them in nurseries.

Plantations and groves.—There is no plantation in this Division. 4·84 acres of groves, transferred from the Sirsa Municipality to the charge of this Department in 1894-95, still exists in Sirsa Church garden.

Avenues.—The lengths of avenues on the roads in this Division are shown below:—

DELHI DISTRICT.

Grand Trunk Road.

	Miles.
Under municipal charge	1·50
Unfit for avenues	0·50
Avenues	18·47
Unplanted	<u>17·53</u>
Total	<u>38·00</u>

Delhi-Sirsa Road.

							Miles.
Under municipal charge	...	...	...	...	...	...	1.00
Unfit for avenues	...	...	...	...	...	...	1.05
Avenues	...	...	...	...	...	...	13.48
Unplanted	...	...	...	...	...	...	0.47
Total	...	...	...	...	...	...	16.00

Delhi-Muthra Road.

Avenues	...	...	...	...	...	...	21.86
Unfit for plantation	...	...	...	...	...	...	1.00
Unplanted	...	...	...	...	...	...	5.14
Total	...	...	...	...	...	...	28.00

Delhi-Gurgaon Road.

Under municipal charge	...	...	...	...	...	...	1.50
Unfit for avenues	...	...	...	...	...	...	1.75
Avenues	...	...	...	...	...	...	11.85
Unplanted	...	...	...	...	...	...	1.65
Total	...	...	...	...	...	...	16.75

ROHTAK DISTRICT.

Delhi-Sirsa Road.

Unfit for avenues	...	...	...	...	...	...	0.50
Avenues	...	...	...	...	...	...	20.50
Unplanted	...	...	...	...	...	...	7.00
Total	...	...	...	...	...	...	28.00

Rohtak-Bhiwani Road.

Unfit for avenues	...	...	...	...	...	...	1.00
Avenues	...	...	...	...	...	...	7.00
Unplanted	...	...	...	...	...	...	11.00
Total	...	...	...	...	...	...	19.00

The lengths shown as unfit for avenues are those where the road passes through villages or towns, and there is no room for an avenue.

The lengths planted during the past three years were—

							Miles.
Grand Trunk road	...	...	...	...	...	...	1.25
Muthra road	...	...	...	...	...	...	1.20
Rohtak road	...	...	...	...	...	...	0.40
Gurgaon road	...	...	...	...	...	...	0.30
Total	...	...	...	...	...	...	3.15

On the other hand, the lengths which failed were as below :—

Grand Trunk road	...	...	...	...	...	...	1.10
Muthra road	...	...	...	...	...	...	1.10
Rohtak road	...	...	...	...	...	...	0.40
Gurgaon road	...	...	...	...	...	...	0.18
Total	...	...	...	...	...	...	2.78

The failures were mainly due to deficient rainfall.

Income.—The average income from arboriculture for the past three years was Rs. 1,143, that for the year under report, Rs. 851. The decrease is due to the comparatively small income derived from groves and avenues.

Expenditure.—The average expenditure on arboriculture for the past three years was Rs. 1,700, and that for the year under report, Rs. 1,619.

DERA ISMAIL KHAN PROVINCIAL DIVISION.

Nurseries.—The area under seedlings at the end of 1892-93 was 1.70, and an area of 0.78 acre was added during the years under report; 1.95 acres were used up, and the plants on 0.12 were transplanted to avenues. Thus the total area of nurseries at the end of these three years amounts to 0.41.

Plantations.—At the beginning of 1893-94 the area under plantations was 157.42 acres, out of which 1.445 acres have failed; 0.209 acre was planted in the Bannu district during 1895-96, thus leaving an area of plantations at the end of 1895-96, in both districts, of 156.184 acres.

Groves.—At the beginning of the year 1893-94 the area of groves was only 10.36, and 6.96 acres (including 4.90 acres planted on Dera Ismail Khan-Tánk road, transferred from Deputy Commissioner) were added during the past three years; 0.86 acre has failed for want of water; this leaves 16.46 acres under groves in both districts at the end of 1895-96.

Avenues.—49.389 miles have been added during the past three years in the Dera Ismail Khan and Bannu districts, and 2.482 miles have failed. Of the miles added, 22.5 were on the Dera-Tánk road, transferred from Deputy Commissioner.

DERA GHAZI KHAN PROVINCIAL DIVISION.

DERA GHAZI KHAN SUB-DIVISION.

Nurseries.—The only nursery in this Sub-division is at mile 5 of the Peshin road, the area of which is 0.05 acre; no more plants have been put in, and none taken out of, this nursery during 1894-96. In 1893-94 0.08 acre was planted for a grove on the Peshin road. No more plants have been put in, and no failures have occurred during 1894-95 and 1895-96.

The total area under cultivation for groves is 2.99 acres, the same as at the end of 1893-94.

Avenues.—Lengths of 2.05 and 1.75 miles were planted during 1893-94 and 1894-95, respectively. There have been no failures in the above years, but 0.87 mile was washed away by the river, which was in flood during 1895-96. During the year ending 31st March, 1896, 160 trees died from heat on all the roads in this Sub-division, and 44 trees were planted out. The same balance of avenues is shown as at the end of 1894-95.

MUZAFFARGARH SUB-DIVISION.

During the year under review 200 young *shisham* trees were planted out along the Dera Gházi Khan-Multan road, section Indus to Chenáb, which are all thriving. There were 4½ miles of young avenue trees on this road at the beginning of the year, of which a mile, near the Chenáb river, had to be abandoned, as the soil did not appear suitable for trees.

The other 3½ miles of trees are from Gházi Ghát to Míáni village. No young trees were destroyed by floods during the year. Forty-six dead trees were sold by public auction for Rs. 258-9-8, and fruit of palm trees for Rs. 5.

LAHORE PROVINCIAL DIVISION.

Nurseries.—The area under nurseries was 3.06 acres at the end of 1892-93, to which 7.41 acres were added, including .59 acre received in transfer from the late Amritsar Division during the three years under report. But transplantation, failure, &c., affected the area to the extent of 5.71 acres, as detailed below:—

					Acre ^s .
(a)	Transferred to roadside avenues	...	...	...	1.33
(b)	Do. to groves	...	...	...	3.42
(c)	Failure	...	...	...	0.22
(d)	Washed away by floods	...	...	...	0.14
(e)	Given up	...	...	...	0.60
					5.71

Plantations.—There are no plantations.

Groves.—At the commencement of the period 22.50 acres of groves were stocked with trees. During the three years 3.42 acres of nurseries, in which the plants had grown up, were transferred to groves, and 4 acres of groves failed, leaving a total area of 21.92 acres at the end of 1895-96.

Avenues.—The mileage of avenues on the different roads is as follows :—

					<i>Miles.</i>
(a)	Grand Trunk road, Beas to Attari	...	...	...	39.30
(b)	Do. Attari to Shalimar, including drainage cut near Shalimar	...	...	...	14.92
(c)	Lahore and Peshawar road	...	...	...	11.26
(d)	Ditto Ferozepore road	...	...	...	37.91
(e)	Ditto Shekhupura road	...	...	...	11.45
(f)	Ditto Civil station road	...	...	...	4.08
(g)	Kangra Valley cart-road	...	...	...	2.40
(h)	Pathankot and Dalhousie road (portion)	...	...	...	4.02
Total					125.34

The following figures will, however, show the actual length of avenues :—

	<i>Length of road.</i>				<i>Lines of trees.</i>		<i>Total length of single line.</i>
(a)	.75	x	1	=	.75		
	12.75	x	2	=	25.50		
	.25	x	3	=	.75		
	21.60	x	4	=	86.40		
	.75	x	5	=	3.75		
	3.20	x	6	=	19.20		
	39.30						136.35
(b)	5.99	x	2	=	11.98		
	2.93	x	3	=	8.79		
	5.00	x	4	=	20.00		
	1.00	x	6	=	6.00		
	14.92						46.77
(c)	1.07	x	1	=	1.07		
	6.14	x	2	=	12.28		
	1.58	x	3	=	4.74		
	2.00	x	4	=	8.00		
	.11	x	5	=	.55		
	.36	x	6	=	2.16		
	11.26						28.80
(d)	2.10	x	1	=	2.10		
	8.82	x	2	=	17.64		
	5.40	x	3	=	16.20		
	10.10	x	4	=	40.40		
	3.05	x	5	=	15.25		
	3.53	x	6	=	21.18		
	1.71	x	7	=	11.97		
	2.77	x	8	=	22.16		
	.43	x	9	=	3.87		
	37.91						150.77
(e)	3.57	x	1	=	3.57		
	4.50	x	2	=	9.00		
	2.00	x	3	=	6.00		
	1.00	x	4	=	4.00		
	.32	x	5	=	1.60		
	.06	x	6	=	.36		
	11.45						24.53
(f)	.22	x	1	=	.22		
	2.44	x	2	=	4.88		
	.42	x	3	=	1.26		
	.22	x	4	=	.88		
	.66	x	6	=	3.96		
	.12	x	7	=	.84		
	4.08						12.04
(g)	2.40	x	1	=	2.40		2.40
(h)	4.02	x		=	4.02		4.02
Grand Total							405.68

The difference between the total length at the beginning of 1893-94 and that at end of 1895-96 is accounted for thus :—

	Miles.
Total length at beginning of 1893-94	91·62
Add length planted during the three years under review ...	74·99
	166·61
Deduct,—Failure during the three years under review ...	41·27
Total ...	125·34

Income.—The proceeds, realised from the sale of loppings, roadside grass, and dry and fallen trees, amounted to Rs. 19,643, or an average of Rs. 6,548, against that of Rs. 3,485 of the three previous years.

Expenditure.—The total expenditure on arboricultural operations during the three years under review is Rs. 14,495, or an average of Rs. 4,832.

Thus the net income amounts to Rs. 5,148, or Rs. 1,716 per annum.

MULTAN PROVINCIAL DIVISION.

Nurseries.—The area actually occupied by nurseries at the end of 1892-93 was 1·07 acres, but, by mistake, it was shown as 1·03 acres in the return for previous years. The omission was noticed and rectified in the return for 1893-94.

To meet the requirements of avenues on the first 3 miles of the Multan and Shere Shah road, an area of ·20 acre in the compound of the Public Works Department bungalow at Multan was converted into a nursery during 1893-94. The total area under nurseries at the end of 1895-96 amounts to 1·27 acres.

Avenues.—The length of different sections of road in the Division suitable for avenues at the end of 1892-93 was 31·30, which has been subsequently increased to 33·30 miles, owing to the transfer of the Jhang and Chah Bhereri Road to the Public Works Department in 1894-95. Previous to 1894-95 the road was maintained by the Deputy Commissioner, Jhang, from Provincial Funds.

The length fully stocked with trees at the end of 1892-93 was 23·27, which has been increased during the triennial period to 25·83 miles.

There was also a failure of ·75 mile on the Jhang and Chichawátni road during 1893-94, due to the hardness and sandy nature of the soil, which in places was largely affected by *reh*, and also to the long drought of 1893. The plants that died were very young and had not attained any size.

Income from arboriculture.—The income during the triennial period amounted to Rs. 44.

STATEMENT No. I.

Rainfall Return.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	AVERAGE RAINFALL OF PAST YEARS.			RAINFALL OF YEAR UNDER REPORT.			REMARKS.
		1st April to 30th Sep- tember.	1st October to 31st March.	Total.	1st April to 30th Sep- tember.	1st October to 31st March.	Total.	
Muzaffargarh	{ 1893-94 1894-95 1895-96 }	4.64	1.06	5.70	{ 6.75 2.93 5.74 }	{ 2.21 1.85 1.07 }	{ 8.96 4.78 6.81 }	
Multan	{ 1893-94 1894-95 1895-96 }	4.72	1.17	5.89	{ 9.35 4.64 9.43 }	{ 3.35 1.93 1.41 }	{ 12.70 6.57 10.84 }	
Dera Ghāzi Khan	{ 1893-94 1894-95 1895-96 }	6.55	1.99	8.54	{ 6.95 2.12 5.74 }	{ 3.60 2.16 1.71 }	{ 10.55 4.28 7.45 }	
Dera Ismail Khan	{ 1893-94 1894-95 1895-96 }	5.73	2.24	7.97	{ 5.24 8.36 7.19 }	{ 3.78 4.65 2.63 }	{ 9.02 13.01 9.82 }	
Montgomery	{ 1893-94 1894-95 1895-96 }	9.08	1.68	10.76	{ 6.20 5.58 10.50 }	{ 3.44 2.26 2.86 }	{ 9.64 7.84 13.36 }	
Jhang	{ 1893-94 1894-95 1895-96 }	6.82	1.79	8.61	{ 6.95 5.36 11.48 }	{ 3.70 1.68 2.85 }	{ 10.65 7.04 14.33 }	
Bannu	{ 1893-94 1894-95 1895-96 }	8.02	3.28	11.30	{ 12.73 9.98 7.42 }	{ 4.83 3.78 1.09 }	{ 17.56 13.76 8.51 }	
Shahpur	{ 1893-94 1894-95 1895-96 }	11.04	3.58	14.62	{ 10.94 13.71 11.73 }	{ 5.46 4.28 2.59 }	{ 16.40 17.99 14.32 }	
Hissār	{ 1893-94 1894-95 1895-96 }	14.18	2.37	16.55	{ 16.60 12.19 10.68 }	{ 4.05 2.71 0.22 }	{ 20.65 14.90 10.90 }	
Ferozepore	{ 1893-94 1894-95 1895-96 }	15.38	2.67	18.05	{ 22.06 23.95 15.85 }	{ 5.57 3.40 1.61 }	{ 27.63 27.35 17.46 }	
Peshāwar	{ 1893-94 1894-95 1895-96 }	6.65	5.42	12.07	{ 7.83 6.13 4.27 }	{ 4.82 8.78 4.75 }	{ 12.65 14.91 9.02 }	
Kohāt	{ 1893-94 1894-95 1895-96 }	11.99	6.31	18.30	{ 14.42 17.99 6.91 }	{ 5.09 7.82 4.37 }	{ 19.51 25.81 11.28 }	
Rohtak	{ 1893-94 1894-95 1895-96 }	17.93	2.26	20.19	{ 42.82 26.39 11.00 }	{ 3.89 8.57 1.75 }	{ 46.71 34.96 12.75 }	
Lahore	{ 1893-94 1894-95 1895-96 }	14.73	3.07	17.80	{ 24.49 16.12 7.49 }	{ 6.72 3.45 2.45 }	{ 31.21 19.57 9.94 }	
Karnāl	{ 1893-94 1894-95 1895-96 }	25.70	4.02	29.72	{ 33.51 32.53 31.60 }	{ 7.93 7.93 0.93 }	{ 41.44 40.46 32.53 }	
Jhelum	{ 1893-94 1894-95 1895-96 }	16.35	5.49	21.84	{ 39.38 33.36 16.67 }	{ 11.11 9.36 2.50 }	{ 50.49 42.72 19.17 }	
Gujránwāla	{ 1893-94 1894-95 1895-96 }	18.43	4.86	23.29	{ 34.27 21.86 16.92 }	{ 9.05 6.56 3.44 }	{ 43.32 28.42 20.36 }	
Gurgāon	{ 1893-94 1894-95 1895-96 }	23.65	2.39	26.04	{ 26.55 24.90 18.38 }	{ 3.54 7.92 1.82 }	{ 30.09 32.82 20.20 }	

STATEMENT No. I—concluded.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	AVERAGE RAINFALL OF PAST YEARS.			RAINFALL OF YEAR UNDER REPORT.			REMARKS.
		1st April to 30th Sep- tember.	1st October to 31st March.	Total.	1st April to 30th Sep- tember.	1st October to 31st March.	Total.	
Amritsar ...	{ 1893-94 1894-95 1895-96 }	21·33	4·52	25·85	{ 27·55 29·76 12·59 }	7·05 3·71 2·31	34·60 33·47 15·90	
Delhi ...	{ 1893-94 1894-95 1895-96 }	25·11	2·97	28·08	{ 27·70 29·74 14·26 }	5·78 10·48 1·89	33·48 40·22 16·15	
Jalandhar ...	{ 1893-94 1894-95 1895-96 }	23·50	4·53	28·03	{ 40·35 44·40 14·24 }	8·14 7·63 2·16	48·49 52·03 16·40	
Ludhiána ...	{ 1893-94 1894-95 1895-96 }	22·45	4·15	26·60	{ 24·84 30·75 18·43 }	4·36 7·79 1·74	29·20 38·54 20·17	
Rawalpindi ...	{ 1893-94 1894-95 1895-96 }	22·32	8·87	31·19	{ 42·45 28·59 12·72 }	12·02 9·87 4·72	54·47 38·46 17·44	
Gujrat ...	{ 1893-94 1894-95 1895-96 }	19·83	6·52	26·35	{ 32·23 28·21 18·34 }	10·32 7·32 1·27	42·55 35·35 19·61	
Gurdáspur ...	{ 1893-94 1894-95 1895-96 }	25·52	5·43	30·95	{ 47·37 57·54 34·73 }	11·94 11·90 3·44	59·31 69·44 38·17	
Ambála ...	{ 1893-94 1894-95 1895-96 }	29·32	3·93	33·25	{ 28·90 33·82 31·02 }	6·72 9·10 1·46	35·62 42·92 32·48	
Siálkot ...	{ 1893-94 1894-95 1895-96 }	28·62	5·87	34·49	{ 38·37 27·65 22·74 }	11·31 6·43 4·08	49·68 34·08 26·82	
Hoshiárpur...	{ 1893-94 1894-95 1895-96 }	28·36	6·06	34·42	{ 42·97 35·82 26·01 }	9·13 16·10 3·11	52·10 51·92 29·12	
Simla ...	{ 1893-94 1894-95 1895-96 }	55·80	8·42	64·22	{ 40·65 76·33 57·54 }	22·49 21·16 7·00	63·14 97·49 64·54	
Hazára ...	{ 1893-94 1894-95 1895-96 }	30·02	14·82	44·84	{ 60·09 47·02 31·28 }	22·27 16·77 10·62	82·36 63·79 41·90	
Kángra (Dharm- sála).	{ 1893-94 1894-95 1895-96 }	104·64	15·66	120·30	{ 134·62 168·70 112·79 }	24·29 30·65 12·04	158·91 199·35 124·83	

STATEMENT No. II.

Progress Statement of Nurseries in the Districts for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Muzaffargarh ...	1893-94	1.25	...	...	1.25	
	1894-95	1.25	0.19	...	1.44	
	1895-96	1.44	0.07	...	1.51	
Multan ...	1893-94	45.18	0.41	0.95	44.64	
	1894-95	44.64	0.48	0.36	44.76	
	1895-96	44.76	0.38	0.50	44.64	
Dera Gházi Khan ...	1893-94	5.15	0.10	...	5.25	
	1894-95	5.25	...	...	5.25	
	1895-96	5.25	...	0.15	5.10	
Dera Ismail Khan ...	1893-94	10.48	0.25	...	10.73	
	1894-95	10.73	0.75	...	11.48	
	1895-96	11.48	0.30	...	11.78	
Montgomery ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Jhang ...	1893-94	0.27	0.14	0.07	0.34	
	1894-95	0.34	0.15	0.15	0.34	
	1895-96	0.34	17.00	0.04	17.30	
Bannu ...	1893-94	0.48	...	...	0.48	
	1894-95	0.48	0.15	0.48	0.15	
	1895-96	0.15	8.15	0.66	7.64	
Shahpur ...	1893-94	34.48	1.06	30.96	4.58	30.96 acres in column 5 include 30.41 acres transferred to groves.
	1894-95	4.58	0.76	0.81	4.53	
	1895-96	4.53	1.13	0.09	5.57	
Hissár ...	1893-94	287.79	...	...	287.79	Column 5 shows 163.24 acres transferred to groves.
	1894-95	287.79	...	163.24	124.55	
	1895-96	124.55	...	...	124.55	
Ferozepore ...	1893-94	3.25	1.00	2.75	1.50	
	1894-95	1.50	1.00	0.75	1.75	
	1895-96	1.75	1.50	2.00	1.25	
Pesháwar ...	1893-94	11.04	2.21	0.25	13.00	
	1894-95	13.00	1.97	0.78	14.19	
	1895-96	14.19	59.01	0.38	72.82	
Kohát ...	1893-94	0.41	0.75	0.50	0.66	
	1894-95	0.66	0.25	0.46	0.45	
	1895-96	0.45	0.47	0.33	0.59	
Rohtak ...	1893-94	1.81	1.63	1.25	2.19	
	1894-95	2.19	...	...	2.19	
	1895-96	2.19	1.73	1.99	1.93	
Lahore ...	1893-94	7.26	1.00	...	8.26	
	1894-95	8.26	0.21	...	8.47	
	1895-96	8.47	...	...	8.47	
Lahore Municipality ...	1893-94	0.20	0.20	}	0.40	
	1894-95	0.40	...			
	1895-96	0.40	...			
Karnál ...	1893-94	8.53	...	...	8.53	
	1894-95					
	1895-96					
Jhelum ...	1893-94	7.07	0.81	...	7.88	
	1894-95	7.88	1.34	...	9.22	
	1895-96	9.22	0.18	...	9.40	
Gujránwála ...	1893-94	2.47	164.76	0.10	167.13	164.76 acres include 164.44 acres planted in the new colonies on the Chenáb Canal.
	1894-95	167.13	0.04	2.70	164.47	
	1895-96	164.47	...	0.03	164.44	

STATEMENT No. II—continued.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Gurgaon	1893-94	3.11	...	0.48	2.63	
	1894-95	2.63	0.06	0.59	2.10	
	1895-96	2.10	...	...	2.10	
Amritsar	1893-94	39.37	...	...	39.37	
	1894-95	39.37	5.75	...	45.12	
	1895-96	45.12	1.00	1.00	45.12	
Amritsar Municipality ...	1893-94	7.34	...	...	7.34	
	1894-95					
	1895-96					
Delhi	1893-94	1.68	0.42	1.28	0.82	
	1894-95	0.82	0.03	...	0.85	
	1895-96	0.85	0.06	0.15	0.76	
Jalandhar	1893-94	15.66	...	1.25	14.41	Column 5 includes 1.25 acres transferred to groves.
	1894-95	14.41	...	5.45	8.96	
	1895-96	8.96	...	...	8.96	
Ludhiāna	1893-94	5.41	...	...	5.41	Column 5 includes 5.45 acres transferred to groves.
	1894-95	5.41	...	1.70	3.71	
	1895-96	3.71	...	1.76	1.95	
Rāwalpindi	1893-94	11.21	...	...	11.21	
	1894-95	11.21	...	...	11.21	
	1895-96	11.21	3.00	...	14.21	
Do. Municipality ...	1893-94	1.56	...	...	1.56	
	1894-95	1.56	...	...	1.56	
	1895-96	1.56	0.12	...	1.68	
Gujrat	1893-94	3.05	0.42	1.69	1.78	
	1894-95	1.78	0.79	0.77	1.80	
	1895-96	1.80	1.76	1.35	2.21	
Do. Municipality ...	1895-96	...	0.02	0.02	...	
Gurdāspur	1893-94	5.71	0.58	2.44	3.85	
	1894-95	3.85	0.24	3.47	0.62	
	1895-96	0.62	2.60	...	3.22	
Ambāla	1893-94	23.94	...	...	23.94	
	1894-95	23.94	...	21.97	1.97	
	1895-96	1.97	0.15	0.05	2.07	
Siālkot	1893-94	8.02	0.56	0.56	8.02	
	1894-95	8.02	0.36	1.94	6.44	
	1895-96	6.44	0.44	0.09	6.79	
Hoshiārpur	1893-94	4.73	...	...	4.73	
	1894-95	4.73	...	...	4.73	
	1895-96	4.73	1.25	...	5.98	
Simla	1893-94	6.02	3.00	1.00	8.02	
	1894-95	8.02	1.00	1.02	8.00	
	1895-96	8.00	...	...	8.00	
Hazāra	1893-94	15.07	0.13	0.06	15.14	
	1894-95	15.14	0.62	0.62	15.14	
	1895-96	15.14	0.31	0.06	15.39	
Kāngra	1893-94	5.13	1.89	2.55	4.47	
	1894-95	4.47	3.43	3.94	3.96	
	1895-96	3.96	0.70	1.14	3.52	
Do. Municipality ...	1893-94	5.67	...	...	5.67	
	1894-95					
	1895-96					
Total ...	1893-94	589.80	181.32	48.14	722.98	
	1894-95	722.98	19.57	211.20	531.35	
	1895-96	531.35	101.33	11.79	620.89	

STATEMENT No. II—continued.

Progress Statement of Nurseries in the Canal Divisions for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7
DIVISION.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Bári Doáb Canal, 1st Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Ditto, 2nd Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Ditto, 3rd Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Upper Sutlej Division, Inundation Canals.	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Multan Canals Division ...	1893-94	13.62	3.65	0.50	16.77	
	1894-95	16.77	3.00	2.50	17.27	
	1895-96	17.27	4.56	5.10	16.73	
Dera Gházi Khan Division, Indus Canals.	1893-94	0.44	...	0.44	...	
	1894-95	...	0.05	...	0.05	
	1895-96	0.05	...	0.05	...	
Muzaffargarh Canals Division ...	1893-94	1.15	...	1.15	...	
	1894-95	...	0.18	...	0.18	
	1895-96	0.18	...	0.07	0.11	
Western Jumna Canal, Karnál Division	1893-94	3.26	0.78	1.67	2.37	1.67 acres in column 5 include 0.75 of an acre transferred to Delhi Division, Western Jumna Canal.
	1894-95	2.37	2.35	1.98	2.74	
	1895-96	2.74	2.49	1.14	4.09	
Ditto, Delhi Division	1893-94	1.81	*2.37	2.36	1.82	Column 5 includes 1.61 acres transferred to plantations and 0.75 of an acre due to adjustment of previous errors during 1893-94.
	1894-95	1.82	4.80	1.59	5.03	
	1895-96	5.03	...	2.21	2.82	
Ditto, Hissár Division	1893-94	1.00	0.91	0.50	1.41	2.21 acres shown in column 5 include 1.40 acres destroyed by fire.
	1894-95	1.41	9.59	0.85	10.15	
	1895-96	10.15	3.00	4.00	9.15	
Sirhind Canal, Ferozepore Division ...	1893-94	1.86	1.70	1.86	1.70	* 2.37 acres shown in column 4 includes 0.75 of an acre received by transfer from Karnál Division, 0.12 of an acre due to correction of previous returns and 1.50 acres newly planted during 1893-94.
	1894-95	1.70	1.73	1.70	1.73	
	1895-96	1.73	1.50	0.80	2.43	
Ditto, Ludhiána Division ...	1893-94	17.51	1.05	4.85	13.71	Column 5 includes 1.27 acres transferred to plantations.
	1894-95	13.71	2.07	1.85	13.93	
	1895-96	13.93	1.11	1.66	13.38	
Ditto, Patiála Division ...	1893-94	7.79	0.04	...	7.83	
	1894-95	7.83	...	1.27	6.56	
	1895-96	6.56	0.22	...	6.78	
Chenáb Canal, 1st Division ...	1893-94	3.13	...	...	3.13	
	1894-95	3.13	0.75	...	3.88	
	1895-96	3.88	1.48	0.42	4.94	
Ditto, 2nd Division ...	1893-94	14.53	0.15	6.01	8.67	
	1894-95	8.67	1.24	8.67	1.24	
	1895-96	1.24	2.90	2.29	1.85	
Ditto, 3rd Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Ditto, 4th Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Swát River Canals Division ...	1893-94	0.48	...	...	0.48	
	1894-95	0.48	0.01	...	0.49	
	1895-96	0.49	...	...	0.49	
Shahpur Canals Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Rohtak Independent Sub-Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	
	1894-95					
	1895-96					
Total ...	1893-94	66.58	10.65	19.34	57.89	
	1894-95	57.89	28.15	20.41	65.63	
	1895-96	65.63	17.56	17.74	65.45	

STATEMENT No. II—concluded.

Progress Statement of Nurseries in the Provincial Divisions for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7
DIVISION.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	
Pesháwar Division	{ 1893-94 1894-95 1895-96	{ 2·32 2·78 2·02	{ 0·46 0·70 1·41	{ ... 1·46 1·44	{ 2·78 2·02 1·99	
Ráwalpindi Division	{ 1893-94 1894-95 1895-96	{ 1·49 1·54 1·65	{ 0·07 0·17 0·20	{ 0·02 0·06 0·10	{ 1·54 1·65 1·75	Column 5 includes 0·02 of an acre washed away by the river.
Kohát North-West Frontier Road Division.	{ 1893-94 1894-95 1895-96	{ ... 3·20 0·43	{ 0·20 0·26 0·14	{ ... 0·03 0·11	{ 0·20 0·43 0·46	
Gujránwála Independent Sub-Division	{ 1893-94 1894-95 1895-96	{ 6·63 6·53 3·01	{ ... 0·29 0·16	{ 0·10 3·81 2·25	{ 6·53 3·01 0·92	
Jalandhar Division	{ 1893-94 1894-95 1895-96	{ 2·69 2·30 1·77	{ 0·08 0·01 0·23	{ 0·47 0·54 0·12	{ 2·30 1·77 1·88	The areas of the Ludhiána and Ferozepore Districts have been separately shown in Ferozepore Independent Executive charge.
Ferozepore Independent Executive charge.	{ 1893-94 1894-95 1895-96	{ 4·36 2·12 1·87	{ 1·78 0·75 ...	{ 4·02 1·00 0·30	{ 2·12 1·87 1·57	
Simla Division	{ 1893-94 1894-95 1895-96	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	
Ambala Division	{ 1893-94 1894-95 1895-96	{ Nil. Nil. ...	{ Nil. Nil. 1·33	{ Nil. Nil. 0·37	{ Nil. Nil. 0·96	
Delhi Division	{ 1893-94 1894-95 1895-96	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	
Dera Ismail Khan Division	{ 1893-94 1894-95 1895-96	{ 1·70 0·49 0·55	{ 0·37 0·33 0·08	{ 1·58 0·27 0·22	{ 0·49 0·55 0·41	0·22 acre shown in column 5 includes 0·12 of an acre transferred to avenues.
Dera Gházi Khan Division	{ 1893-94 1894-95 1895-96	{ 0·04 0·05 0·05	{ 0·05	{ 0·04	{ 0·05 0·05 0·05	
Lahore Division	{ 1893-94 1894-95 1895-96	{ 3·06 4·35 7·09	{ 1·69 5·29 0·43	{ 0·40 * 2·55 † 2·76	{ 4·35 7·09 4·76	Column 4 includes 0·59 of an acre received by transfer from Amritsar Provincial Division. * Column 5 includes 1·46 acres transferred to groves, 0·93 of an acre transferred to roadside, 0·14 of an acre washed away by floods, and 0·02 of an acre given up. † The entry (2·76 acres) includes 1·96 acres transferred to groves.
Amritsar Division	{ 1893-94 1894-95 1895-96	{ 0·59	{	{ 0·59	{	Column 5 includes 0·59 of an acre transferred to Lahore Provincial Division.
Multan Division	{ 1893-94 1894-95 1895-96	{ 1·03 1·27 ...	{ 0·24	{	{ 1·27 1·27 ...	The entry in column 4 includes 0·04 of an acre due to the correction of previous returns.
Total	{ 1893-94 1894-95 1895-96	{ 23·91 21·63 19·71	{ 4·94 7·80 3·98	{ 7·22 9·72 7·67	{ 21·63 19·71 16·02	

7
STATEMENT No. III.

Progress Statement of Plantations in the Districts for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	
Muzaffargarh ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Multan ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Dera Ghāzi Khan	{ 1893-94 1894-95 1895-96 }	1,677-00	60-00	...	...	60-00	
Dera Ismail Khan	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Montgomery ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Jhang ...	{ 1893-94 1894-95 1895-96 }	244-29	244-29	...	...	244-29	
Bannu ...	{ 1893-94 1894-95 1895-96 }	1,200-00	{ 1,200-00 1,193-54 1,192-54 }	{ 11-00 3-00 0-12 }	{ 17-46 4-00 ...	{ 1,193-54 1,192-54 1,192-66 }	
Shahpur ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Hissār ...	{ 1893-94 1894-95 1895-96 }	{ 117-66 139-66 139-66 }	{ 73-66 104-91 118-23 }	{ 31-25 41-26 ...	{ ... 27-94 ...	{ 104-91 118-23 118-23 }	27-94 acres include 22-04 acres transferred to groves.
Ferozepore ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Peshāwar ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Kohāt ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Rohtak ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Lahore ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Karnāl ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Jhelum ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Gujránwāla ...	{ 1893-94 1894-95 1895-96 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Gurgāon ...	{ 1893-94 1894-95 1895-96 }	2,156-34	114-81	{ ... 13-47 13-47 }	{ ... 13-47 13-47 }	114-81	

STATEMENT No. III—continued.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	
Amritsar ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Do. Municipality	{ 1893-94 1894-95 1895-96 }	{ 7-00 7-00 7-00 }	{ 7-00 7-00 7-00 }	{ }	{ }	{ 7-00 7-00 7-00 }	
Delhi ...	{ 1893-94 1894-95 1895-96 }	{ 1,023-15 917-65 917-65 }	{ 611-77 654-32 574-47 }	{ 103-10 40-30 4-09 }	{ 60-55 120-15 2-17 }	{ 654-32 574-47 576-39 }	
Do. Municipality	{ 1893-94 1894-95 1895-96 }	{ 938-73 938-73 938-73 }	{ 938-73 938-73 938-73 }	{ }	{ }	{ 938-73 938-73 938-73 }	
Jalandhar ...	{ 1893-94 1894-95 1895-96 }	{ 164-00 160-00 103-34 }	{ 164-00 160-00 103-34 }	{ ... 0-01 ... }	{ 4-00 * 56-67 21-91 }	{ 160-00 103-34 81-43 }	Column 6 includes 4 acres washed away by the river.
Ludhiána ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	* Column 6 includes 11-66 acres washed away by the river and 45-01 acres leased for cultivation.
Ráwalpindi ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	The trees over an area of 21-91 acres were cut down and sold during 1895-96.
Gujrát ...	{ 1893-94 1894-95 1895-96 }	{ 0-10 0-56 0-56 }	{ 0-10 0-56 0-56 }	{ ... 0-56 0-03 }	{ ... 0-10 0-01 }	{ 0-10 0-56 0-58 }	
Gurdáspur ...	{ 1893-94 1894-95 1895-96 }	{ 26-74 26-74 26-74 }	{ 25-55 25-65 25-65 }	{ 0-15 }	{ 0-05 }	{ 25-65 25-65 25-65 }	
Ambála ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Siálkot ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Do. Municipality	{ 1893-94 1894-95 1895-96 }	{ }	{ }	{ 2-00 2-00 2-00 }	{ }	{ 2-00 2-00 2-00 }	
Hoshiárpur ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Simla ...	{ 1893-94 1894-95 1895-96 }	{ 52-50 56-50 57-50 }	{ 52-50 56-50 57-50 }	{ 6-00 1-00 ... }	{ 2-00 }	{ 56-50 57-50 57-50 }	
Hazára ...	{ 1893-94 1894-95 1895-96 }	{ 41-63 41-63 41-63 }	{ 29-50 29-75 29-25 }	{ 0-37 0-12 0-62 }	{ 0-12 0-62 0-25 }	{ 29-75 29-25 29-62 }	
Kángra Municipality	{ 1893-94 1894-95 1895-96 }	{ 59-23 59-23 59-23 }	{ 59-23 59-23 59-23 }	{ 18-01 }	{ 13-51 }	{ 59-23 63-73 63-73 }	
Total ...	{ 1893-94 1894-95 1895-96 }	{ 7,708-37 7,624-87 7,569-67 }	{ 3,581-14 3,648-83 3,525-60 }	{ 151-87 99-72 38-34 }	{ 84-19 222-95 51-32 }	{ 3,648-83 3,525-60 3,512-62 }	

STATEMENT No. III—continued.

Progress Statement of Plantations in the Canal Divisions for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8
DIVISION.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	Acres.	
Bári Doáb Canal, 1st Division.	1893-94 1894-95 1895-96	3,564·00	1,903·49 1,919·49 1,936·09	16·00 16·60 32·65	 44·00	1,919·49 1,936·09 1,924·74	
Bári Doáb Canal, 2nd Division.	1893-94 1894-95 1895-96	1,428·31 1,431·80	1,428·31 1,431·80	28·97 ...	25·48 a 3·49	1,431·80 1,431·80 1,428·31	3·49 acres were sown with <i>kikar</i> and 25·48 acres were felled and re-sown.
Bári Doáb Canal, 3rd Division.	1893-94 1894-95 1895-96	968·35 965·35 968·35	968·35 965·35	... ...	b 3·00 ...	965·35 965·35 965·35	a 3·49 acres due to correction of previous errors. b Trees were cut down over 3 acres.
Upper Sutlej Division, Irrigation Canals.	1893-94 1894-95 1895-96	45·01 45·59	45·01 45·01	... 0·58	... ...	45·01 45·59	
Multan Canals Division.	1893-94 1894-95 1895-96	189·86	174·77 173·97 173·97	0·20	1·00	173·97	
Dera Ghāzi Khan Division, Indus Canals.	1893-94 1894-95 1895-96	20·68	20·68	...	...	20·68	
Musaaffargarh Canals Division.	1893-94 1894-95 1895-96	... 1·15 0·85	... 1·15 0·85	1·15	... 0·30 ...	1·15 0·85 0·85	
Western Jumna Canal, Karnāl Division.	1893-94 1894-95 1895-96	1,104·32 1,103·72	1,119·21 1,101·97 1,102·31	4·09 0·34 33·18	21·33 ... 143·76	1,101·97 1,102·31 991·73	21·33 acres in column 6 include 9·40 acres transferred to Delhi Division and 9·05 acres to Hissār Division.
Western Jumna Canal, Delhi Division.	1893-94 1894-95 1895-96	1,861·26 1,860·26 1,601·01	1,352·79 1,365·61 1,364·48	c 17·62 18·73 ...	4·80 19·86 0·03	1,365·61 1,364·48 1,364·45	d 17·62 acres in column 5 include 1·61 acres transferred from nurseries, 9·40 acres transferred from Karnāl Division, 2·41 acres due to adjustment of previous errors and 4·20 acres newly planted during 1893-94.
Western Jumna Canal, Hissār Division.	1893-94 1894-95 1895-96	110·25 104·05 131·75	35·00 79·05 119·25	d 59·05 50·20 25·55	15·00 10·00 19·00	79·05 119·25 125·80	e 59·05 acres in column 5 include 9·05 acres transferred from Karnāl Division, 2·41 acres due to adjustment of previous errors and 4·20 acres newly planted during 1893-94.
Sirhind Canal, Ferozepore Division.	1893-94 1894-95 1895-96	4,117·68	1,984·59 2,226·94 2,237·06	242·35 24·62 86·11	... 14·50 e 47·20	2,226·94 2,237·06 2,275·97	f 47·20 acres in column 6 include 0·80 of an acre transferred to advances to stock up 0·80 of a mile.
Sirhind Canal, Ludhiāna Division.	1893-94 1894-95 1895-96	6,608·00	4,438·52 4,503·71 4,523·70	79·96 21·40 28·95	14·77 1·41 12·60	4,503·71 4,523·70 4,540·05	g 14·77 acres in column 6 include 0·80 of an acre transferred to advances to stock up 0·80 of a mile.
Sirhind Canal, Patialā Division.	1893-94 1894-95 1895-96	3,381·88 3,918·48	2,485·12 2,493·19	... f 8·07 45·00	... ... ...	2,485·12 2,493·19 2,538·19	h 8·07 acres in column 6 include 0·80 of an acre transferred to advances to stock up 0·80 of a mile.
Chenāb Canal, 1st Division.	1893-94 1894-95 1895-96	432·28 635·19 806·25	402·30 458·94 527·31	56·55 147·66 g 167·89	... 79·29 g 60·00	458·94 527·31 635·20	i 167·89 acres in column 5 include 141·07 acres due to correction of previous errors and 60 acres in column 6 failed on account of want of rain.
Chenāb Canal, 2nd Division.	1893-94 1894-95 1895-96	18·36 64·27 126·27	18·36 64·27 126·27	66·25 67·00 101·76	20·34 5·00 8·30	64·27 126·27 219·13	j 20·34 acres in column 5 include 1·27 acres received by transfer from nurseries.
Chenāb Canal, 3rd Division.	1893-94 1894-95 1895-96	Nil.	Nil.	Nil.	Nil.	Nil.	k 1·27 acres received by transfer from nurseries.
Chenāb Canal, 4th Division.	1893-94 1894-95 1895-96	... 5·52 15·52	... 5·52 15·52	5·52 10·00 9·00	... ... ...	5·52 15·52 24·52	l 5·52 acres in column 5 include 1·27 acres received by transfer from nurseries.
Swāt River Canals Division.	1893-94 1894-95 1895-96	107·80 114·30	107·80 114·30	... 6·50 5·48	 0·35	107·80 114·30 119·43	m 6·50 acres in column 5 include 1·27 acres received by transfer from nurseries.
Shahpur Canals Division.	1893-94 1894-95 1895-96	Nil.	Nil.	Nil.	Nil.	Nil.	n 1·27 acres received by transfer from nurseries.
Rohtak Independent Sub-Division.	1893-94 1894-95 1895-96	Nil.	Nil.	Nil.	Nil.	Nil.	o 1·27 acres received by transfer from nurseries.
Total ...	1893-94 1894-95 1895-96	*24,458·04 *24,706·22 24,784·11	16,484·39 16,956·38 17,197·14	577·71 371·12 536·15	105·72 130·35 339·33	16,956·38 17,197·14 17,392·96	

* Difference due to correction of figures in the annual statements.

STATEMENT No. III—concluded.

Progress Statement of Plantations in the Provincial Divisions for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8
DIVISION.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	Acres.	
Pesháwar Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Ráwalpindi Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Kohát North-West Frontier Road Division.	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Gujránwála Independent Sub-Division.	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Jalandhar Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Ferozepore Independent Executive charge.	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Simla Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Ambála Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Delhi Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Dera Ismail Khan Division	{ 1893-94 1894-95 1895-96 }	{ 207·96 207·96 207·96 }	{ 157·42 157·42 156·00 }	{ 0·21 }	{ ... 1·42 0·03 }	{ 157·42 156·00 156·18 }	
Dera Gházi Khan Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Lahore Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Amritsar Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Multan Division ...	{ 1893-94 1894-95 1895-96 }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	{ Nil. Nil. Nil. }	
Total ...	{ 1893-94 1894-95 1895-96 }	{ 207·96 207·96 207·96 }	{ 157·42 157·42 156·00 }	{ 0·21 }	{ ... 1·42 0·03 }	{ 157·42 156·00 156·18 }	

STATEMENT No. IV.

Progress Statement of Groves in the Districts for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Muzaffargarh	{ 1893-94 1894-95 1895-96	231-98 233-78 232-55	1-80 ... 2-72	... 1-23 ...	233-78 232-55 235-27	
Multan	{ 1893-94 1894-95 1895-96	21-38	...	...	21-38	
Dera Ghazi Khan...	{ 1893-94 1894-95 1895-96	10-00	...	...	10-00	
Dera Ismail Khan ..	{ 1893-94 1894-95 1895-96	17-50 12-60	... ...	4-90 ...	12-60 12-60	4-90 acres transferred to the Dera Ismail Khan Provincial Division.
Montgomery	{ 1893-94 1894-95 1895-96	746-00	...	...	746-00	
Jhang	{ 1893-94 1894-95 1895-96	25-83	...	...	25-83	
„ Municipality	{ 1893-94 1894-95 1895-96	4-09	...	...	4-09	
Bannu	{ 1893-94 1894-95 1895-96	1-93 11-93 9-84	10-40 b 0-91 ...	a 0-40 3-00 0-68	11-93 9-84 9-18	a 0-40 of an acre transferred to Dera Ismail Khan Provincial Division. b 0-91 of an acre includes 0-40 due to correction of previous returns.
Lahpur	{ 1893-94 1894-95 1895-96	984-10 1,079-79 1,115-69	c 107-00 42-13 56-86	11-31 6-23 7-61	1,079-79 1,115-69 1,164-94	c 107 acres include 30-41 acres received by transfer from nurseries.
Hissar	{ 1893-94 1894-95 1895-96	161-63 161-63 332-89	... d 192-70 5-56	... 21-44 ...	161-63 332-89 338-45	d 192-70 acres include 163-24 acres received by transfer from nurseries, 7-42 acres transferred from Municipality, and 22-04 acres received by transfer from plantations.
„ Municipality	{ 1893-94 1894-95 1895-96	27-79 27-79 15-53	... ... ...	... e 12-26 f 7-16	27-79 15-53 8-37	e 12-26 acres include 7-42 acres transferred to Hissar District and 4-84 transferred to Delhi Provincial Division. f 7-16 acres include 5-56 acres transferred to Hissar District.
Ferozepore	{ 1893-94 1894-95 1895-96	465-54 461-54 466-54	3-00 5-00 2-00	7-00	461-54 466-54 468-54	
Peshawar	{ 1893-94 1894-95 1895-96	20-65	...	...	20-65	
„ Municipality	{ 1893-94 1894-95 1895-96	Nil.	Nil.	Nil.	Nil.	

STATEMENT No. IV—continued.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Kohát	{ 1893-94 1894-95 1895-96 }	13·78 15·18 19·68	1·62 5·62 4·04	0·22 1·12 0·01	15·18 19·68 23·71	
Rohtak	{ 1893-94 1894-95 1895-96 }	543·94	...	...	543·94	
Lahore	{ 1893-94 1894-95 1895-96 }	15·92 15·92 16·73	1·02 ...	0·21 ...	15·92 16·73 16·73	
Karnál	{ 1893-94 1894-95 1895-96 }	317·37	...	...	317·37	
Jhelum	{ 1893-94 1894-95 1895-96 }	5·62	...	...	5·62	
Gujránwála	{ 1893-94 1894-95 1895-96 }	... 1·51	1·51 ...	... ...	1·51 1·51	
Gurgáon	{ 1893-94 1894-95 1895-96 }	285·39	...	...	285·39	
Amritsar	{ 1893-94 1894-95 1895-96 }	3·37	...	...	3·37	
Delhi	{ 1893-94 1894-95 1895-96 }	14·61 15·37 15·80	0·87 0·63 6·29	0·11 0·20 5·58	15·37 15·80 16·51	
„ Municipality	{ 1893-94 1894-95 1895-96 }	... 1·50	1·50 ...	... ...	1·50 1·50	1·50 acres omitted in previous returns.
Jalandhar	{ 1893-94 1894-95 1895-96 }	5·31 6·56 12·01	g 1·25 h 5·45 ...	 1·25	6·56 12·01 10·76	g 1·25 acres received by transfer from nurseries. h 5·45 acres received by transfer from nurseries.
Ludhiána	{ 1893-94 1894-95 1895-96 }	352·59 352·59 353·59	... 1·00 i 108·06	... ... ...	352·59 353·59 461·65	The trees over an area of 1·25 acres were cut down and sold during 1895-96.
Ráwalpindi	{ 1893-94 1894-95 1895-96 }	359·95	...	...	359·95	i The entry in column 4 is due to correction of previous returns.
„ Municipality	{ 1893-94 1894-95 1895-96 }	20·29 20·29 20·25	... ... ...	... 0·04 0·04	20·29 20·25 20·21	
Gujrát	{ 1893-94 1894-95 1895-96 }	... 177·53 177·09	185·21 ... 3·15	7·68 0·44 3·42	177·53 177·09 176·82	185·21 acres include 185·00 acres due to correction of previous returns.

STATEMENT No. IV—continued.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Gujrat Municipality	1895-96	...	4.53	1.00	3.53	
Gurdáspur	{ 1893-94 1894-95 1895-96	{ 4.88 4.88 8.15	{ ... 3.47 ...	{ ... 0.20 ...	{ 4.88 8.15 8.15	
Ambála	{ 1893-94 1894-95 1895-96	{ 112.90 112.90 43.87	{	{ ... 69.03 24.93	{ 112.90 43.87 18.94	
Siálkot	{ 1893-94 1894-95 1895-96	{ 13.15 13.17 14.67	{ 0.02 1.50 ...	{	{ 13.17 14.67 14.67	
Hoshiárpur	{ 1893-94 1894-95 1895-96	{ 15.23	{ ...	{ ...	{ 15.23	
Simla	{ 1893-94 1894-95 1895-96	{ 13.62	{ ...	{ ...	{ 13.62	
Hazára	{ 1893-94 1894-95 1895-96	{ 34.65	{ ...	{ ...	{ 34.65	
Kángra	{ 1893-94 1894-95 1895-96	{ 19.05 77.68 77.68	{ 58.63 ... 0.60	{	{ 77.68 77.68 78.28	
" Municipality...	{ 1893-94 1894-95 1895-96	{ Nil.	{ Nil.	{ Nil.	{ Nil.	
Total	{ 1893-94 1894-95 1895-96	{ 4,870.04 5,209.72 5,355.26	{ 371.30 260.94 193.81	{ 31.62 115.40 51.68	{ 5,209.72 5,355.26 5,497.39	

STATEMENT No. IV—concluded.

Progress Statement of Groves in the Provincial Divisions for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7
DIVISION.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	
Pesháwar Division	1893-94 1894-95 1895-96	127·42 127·38	... ...	0·04 ...	127·38 127·38	The entry in column 5 is due to correction of previous returns.
Ráwalpindi Division	1893-94 1894-95 1895-96	228·83 209·55 209·55	 9·02	19·28 ... 1·30	209·55 209·55 217·27	19·28 acres include 10·50 acres washed away by the river and 8·78 acres transferred to the Military Department.
Kohát North-West Frontier Road Division.	1893-94 1894-95 1895-96	1·18 1·71 1·83	0·88 0·12 ...	0·35	1·71 1·83 1·83	
Gujránwála Independent Sub-Division.	1893-94 1894-95 1895-96	262·41 260·75 260·13	0·34 0·38 ...	2·00 1·00 ...	260·75 260·13 260·13	
Jalandhar Division	1893-94 1894-95 1895-96	... 5·25	5·25 ...	... ...	5·25 5·25	The areas of the Ferozepore and Ludhiána Districts have been separately shown in Ferozepore Independent Executive charge.
Ferozepore Independent Executive charge.	1893-94 1894-95 1895-96	496·41 496·41	... ...	... ...	496·41 496·41	
Simla Division	1893-94 1894-95 1895-96	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	
Ambála Division	1893-94 1894-95 1895-96	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	
Delhi Division	1893-94 1894-95 1895-96	 4·84	... 4·84 ...	... ... ...	... 4·84 4·84	4·84 acres received by transfer from Sirsa Municipal Committee in the Hissár District.
Dera Ismail Khan Division.	1893-94 1894-95 1895-96	10·36 17·24 17·24	6·88 ... 0·08	 0·86	17·24 17·24 16·46	Column 4 includes 4·90 acres transferred from Dera Ismail Khan District and 0·40 of an acre from Banna District.
Dera Gházi Khan Division.	1893-94 1894-95 1895-96	2·91 2·99	0·08 ...	... ...	2·99 2·99	
Lahore Division	1893-94 1894-95 1895-96	22·50 22·50 23·96	... 1·46 1·96	 4·00	22·50 23·96 21·92	1·46 acres received by transfer from nurseries. 1·96 acres received by transfer from nurseries.
Amritsar Division	1893-94 1894-95 1895-96	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	
Multan Division	1893-94 1894-95 1895-96	1·70	...	...	1·70	
Total	1893-94 1894-95 1895-96	1,153·72 1,145·48 1,151·28	13·43 6·80 11·06	21·67 1·00 6·16	1,145·48 1,151·28 1,156·18	

STATEMENT No. V.

Progress Statement of Avenues in the Districts for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Muzaffargarh ...	1893-94 1894-95 1895-96	.295·85	107·27 111·10 118·35	4·10 7·25 1·83	0·27 ... 0·18	111·10 118·35 120·00	
Multan ...	1893-94 1894-95 1895-96	1,231·24 1,227·00 1,229·00	213·44 202·36 218·33	24·27 23·24 10·34	35·35 7·27 5·92	202·36 218·33 222·75	35·35 miles in column 6 include 10·50 miles due to correction of previous returns and 24·85 miles as actual failures.
Dera Gházi Khan	1893-94 1894-95 1895-96	114·00	26·75 28·50 28·50	1·75 ... 6·50	... ... ...	28·50 28·50 35·00	
Dera Ismail Khan	1893-94 1894-95 1895-96	234·00 190·00 190·00	44·00 47·00 49·50	4·00 3·00 0·50	1·00 0·50 0·25	47·00 49·50 49·75	
Montgomery ...	1893-94 1894-95 1895-96	250·00	133·00 131·00 131·00	 1·00	2·00	13·00 131·00 132·00	2 miles in columns 6 due to correction of previous returns.
Jhang ...	1893-94 1894-95 1895-96	223·49	34·35 34·35 32·35	 1·65	... 2·00 0·65	34·35 32·35 33·35	2 miles transferred to Multan Provincial Sub-Division during 1894-95.
„ Municipality	1893-94 1894-95 1895-96	48·09	21·82	...	...	21·82	
Bannu ...	1893-94 1894-95 1895-96	131·29 147·29 147·29	69·23 47·80 58·10	6·09 12·65 11·68	27·52 2·35 1·00	47·80 58·10 68·78	27·52 miles include 20·25 miles transferred to the Dera Ismail Khan Provincial Division and 6·75 miles due to correction of previous returns.
Shahpur ...	1893-94 1894-95 1895-96	541·12	472·37 482·13 486·83	10·05 4·72 28·54	0·24 0·07 3·77	482·18 486·83 511·60	12·65 miles include 5 miles due to adjustment of previous errors.
„ Municipality	1893-94 1894-95 1895-96	11·22	14·08 14·35 15·14	0·27 0·79 0·24	 0·01	14·35 15·14 15·37	
Hissár ...	1893-94 1894-95 1895-96	393·81	103·05	...	...	103·05	
„ Municipality	1893-94 1894-95 1895-96	5·59	5·21	...	...	5·21	
Ferozepore ...	1893-94 1894-95 1895-96	731·75	508·90 514·00 520·00	6·00 6·00 7·00	0·90 ... 6·00	514·00 520·00 521·00	0·90 mile due to erosion by River Sutlej during 1893-94.
Pesráwar ...	1893-94 1894-95 1895-96	511·00 560·94 570·94	367·90 410·90 434·80	84·25 47·80 38·00	41·25 23·90 17·00	410·90 434·80 455·80	
„ Municipality	1893-94 1894-95 1895-96	5·50	5·50	...	...	5·50	
Kohát ...	1893-94 1894-95 1895-96	14·32	5·21 7·04 9·29	1·98 4·75 3·15	0·15 2·50 2·15	7·04 9·29 10·29	

STATEMENT No. V—continued.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Rohtak	1893-94 1894-95 1895-96	461·08 461·08 415·08	222·43 227·43 228·93	6·00 3·00 5·00	1·00 1·50 37·00	227·43 228·93 196·93	37·00 miles include 36 miles transferred to the Delhi Provincial Division.
Lahore	1893-94 1894-95 1895-96	412·16 413·41 413·41	192·96 225·67 228·44	33·96 3·27 2·83	1·25 0·50 1·58	225·67 228·44 229·69	33·96 miles include 10·46 miles received by transfer from Lahore Provincial Division.
„ Municipality	1893-94 1894-95 1895-96	56·14	53·43	...	...	53·43	
Karnál	1893-94 1894-95 1895-96	241·70	77·70 77·70 78·07	0·37 4·35	1·12	77·70 78·07 81·30	
Municipality	1893-94 1894-95 1895-96	8·23	8·23	...	...	8·23	
Jhelum	1893-94 1894-95 1895-96	395·01 406·01 406·01	274·25 283·83 301·74	10·19 19·21 11·02	0·61 1·30 0·34	283·83 301·74 312·42	
„ Municipality	1893-94 1894-95 1895-96	16·52	15·95 16·36 16·59	0·46 0·42 2·40	0·05 0·19 0·51	16·36 16·59 18·48	
Gujránwála	1893-94 1894-95 1895-96	457·83	113·03 141·99 164·99	33·55 23·00 ...	4·59 ...	141·99 164·99 164·99	
Gurgáon	1893-94 1894-95 1895-96	396·15	253·80 257·70 258·70	6·90 18·14 1·25	3·00 17·14 0·50	257·70 258·70 259·45	
Amritsar	1893-94 1894-95 1895-96	278·98	167·85 171·17 171·77	14·55 14·03 12·82	11·23 13·43 12·08	171·17 171·77 172·51	
„ Municipality	1893-94 1894-95 1895-96	66·00	48·27 50·04 51·12	1·77 1·08 ...	...	50·04 51·12 51·12	
Delhi	1893-94 1894-95 1895-96	333·12 338·12 337·67	151·59 156·00 159·22	27·35 16·32 3·27	22·94 13·10 11·26	156·00 159·22 151·23	
„ Municipality	1893-94 1894-95 1895-96	38·00	25·00	...	...	25·00	
Jalandhar	1893-94 1894-95 1895-96	283·80	230·43 236·68 236·68	6·25	1·75	236·68 236·68 234·93	1·75 miles due to correction of previous returns.

STATEMENT No. V—continued.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Ludhiána ...	1893-94 1894-95 1895-96	157·75	138·24 139·36 149·61	1·12 10·25 9·75	 37·86	139·36 149·61 121·50	37·86 miles include 28·11 miles due to correction of previous returns.
Ráwalpindi ...	1893-94 1894-95 1895-96	987·97	330·82 334·20 333·84	7·67 ... 4·20	4·29 0·36 12·71	334·20 333·84 325·33	
„ Municipality	1893-94 1894-95 1895-96	11·61	10·36 10·36 10·46	... 0·12 ...	... 0·02 ...	10·36 10·46 10·46	
Gujrat ...	1893-94 1894-95 1895-96	611·00	418·00 420·00 422·34	10·60 13·81 16·99	8·60 11·47 12·72	420·00 422·34 426·61	9·08 miles include 7·48 miles due to omissions of previous years.
„ Municipality	1895-96	10·85	...	9·08	1·44	7·64	
Gurdáspur ...	1893-94 1894-95 1895-96	605·39	426·80 458·50 457·50	35·16 25·00 13·00	3·46 26·00 4·50	458·50 457·50 466·00	
Ambála ...	1893-94 1894-95 1895-96	383·92 344·51 367·66	323·99 289·41 237·91	33·27 14·73 23·40	67·85 66·23 65·03	289·41 237·91 196·28	66·23 miles in column 6 include 28·43 miles transferred to Ambála Provincial Division during 1894-95.
Siálkot ...	1893-94 1894-95 1895-96	838·50	479·49 508·49 512·74	29·00 9·25 29·50	... 5·00 0·50	508·49 512·74 541·74	
„ Municipality	1893-94 1894-95 1895-96	6·50	3·50	 1·50	... ... ...	3·50 3·50 5·00	
Hoshiárpur ...	1893-94 1894-95 1895-96	440·50	434·16 440·16 440·16	6·00 ... 0·34	... ... ...	440·16 440·16 440·50	
Simla ...	1893-94 1894-95 1895-96	2·66	2·66	...	...	2·66	
Hazára ...	1893-94 1894-95 1895-96	47·00	15·80 16·30 16·30	0·50 1·00 3·00	... 1·00 1·00	16·30 16·30 18·30	
„ Municipality	1893-94 1894-95 1895-96	4·50	4·00 4·25 4·25	0·25 ... 0·50	 0·25	4·25 4·25 4·50	
Kángra ...	1893-94 1894-95 1895-96	501·59	367·34 394·76 407·84	66·69 27·97 14·94	39·27 14·89 5·83	394·76 407·84 416·95	
Dharmśála Municipality.	1893-94 1894-95 1895-96	6·35	6·35	...	...	6·35	
Total ...	1893-94 1894-95 1895-96	12,790·23 *12,771·77 12,787·32	6,928·51 7,125·69 7,226·14	474·00 311·17 279·57	276·82 210·72 244·91	7,125·69 7,226·14 7,260·80	

* Difference due to correction of figures in the annual statement.

STATEMENT No. V—continued.

Progress Statement of Avenues in the Canal Divisions for the year 1893-94 to 1895-96.

1	2	3	4	5	6	7	8
DIVISION.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals, fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Bári Doáb Canal, 1st Division.	1893-94 1894-95 1895-96	179.70	147.76	6.50	1.40	147.76 147.76 152.86	
Bári Doáb Canal, 2nd Division.	1893-94 1894-95 1895-96	103.53 103.06 103.06	103.06 103.06 103.06	...	...	103.06 103.06 103.06	
Bári Doáb Canal, 3rd Division.	1893-94 1894-95 1895-96	72.80	72.80 71.80 69.80	...	1.00 2.00 ...	71.80 69.80 69.80	The entries in column 6 are due to trees blown down by storms and to dry trees being cut.
Upper Sutlej Division, Inundation Canal.	1893-94 1894-95 1895-96	478.31 491.77	283.18 283.18	...	...	283.18 316.78	
Multán Canals Division.	1893-94 1894-95 1895-96	703.10 712.60 626.75	569.60 572.80 585.10	10.70 28.40 7.60	b 7.50 c 16.10 15.70	572.80 585.10 577.00	a Tamarisk and <i>kikar</i> trees in these lengths grow spontaneously on the canal and rájbahá banks.
Dera Gházi Khan Division, Indus Canals.	1893-94 1894-95 1895-96	401.53 401.53 399.48	181.57 182.57 182.57	1.00 ...	...	182.57 182.57 180.71	b 7.50 miles include 4.75 miles due to river action.
Muzaffargarh Canal Division.	1893-94 1894-95 1895-96	96.11 80.38 69.15	36.68 29.61 29.11	2.80 0.30 0.07	9.87 0.80 5.20	29.61 29.11 23.98	c 16.10 miles include 15.10 miles due to river action
Western Jumna Canal, Karnál Division.	1893-94 1894-95 1895-96	437.37 490.77 490.77	398.89 276.48 288.20	24.83 12.22 19.44	d 147.24 0.50 7.65	276.48 288.20 299.99	d 147.24 miles in column 6 include 119.72 miles transferred to Hissár Division and 17.95 miles to Delhi Division.
Western Jumna Canal, Delhi Division.	1893-94 1894-95 1895-96	320.08 370.19 362.79	219.85 234.80 230.50	e 19.75 ...	4.80 4.30 4.97	234.80 230.50 245.40	e 19.75 miles in column 5 include 17.95 miles transferred from Karnál Division, 0.80 of a mile transferred from plantations, and 1 mile newly planted during 1893-94.
Western Jumna Canal, Hissár Division.	1893-94 1894-95 1895-96	184.79 184.79 191.22	7.40 150.72 164.39	f 146.86 25.76 16.00	3.54 12.09 14.00	150.72 164.39 166.39	f 146.86 miles in column 5 include 119.72 miles transferred from Karnál Division and 27.14 miles planted during 1893-94.
Sirhind Canal, Ferozepore Division.	1893-94 1894-95 1895-96	294.20	58.20 59.20 58.38	1.60 ...	0.60 0.82 ...	59.20 58.38 159.43	g Column 5 includes 4.48 miles actually planted during the year and 96.57 miles due to correction of previous returns.
Sirhind Canal, Ludhiána Division.	1893-94 1894-95 1895-96	334.40	191.65 196.36 209.15	7.40 13.04 10.75	2.69 0.25 1.75	196.36 209.15 218.15	
Sirhind Canal, Patiala Division.	1893-94 1894-95 1895-96	221.34	114.69 116.33 120.24	3.74 6.57 11.10	2.10 2.66 2.70	116.33 120.24 128.64	
Chenab Canal, 1st Division.	1893-94 1894-95 1895-96	90.50 105.30 109.79	51.90 50.40 59.40	8.50 15.00 19.92	10.00 6.00 7.18	50.40 59.40 72.14	7.18 miles include 6.68 miles due to correction of previous returns.
Chenab Canal, 2nd Division.	1893-94 1894-95 1895-96	501.60 501.00 509.10	18.57 25.93 53.00	25.10 34.07 39.08	17.74 7.00 1.60	25.93 53.00 90.48	
Chenab Canal, 3rd Division.	1893-94 1894-95 1895-96	Nil.	Nil.	Nil.	Nil.	Nil.	
Chenab Canal, 4th Division.	1893-94 1894-95 1895-96	Nil. 61.60	Nil. ...	Nil. 0.20	Nil. ...	Nil. 0.20	
Swát River Canal Division.	1893-94 1894-95 1895-96	176.00 176.00 177.80	148.45 153.95 154.55	5.50 0.60 14.84	...	153.95 154.55 139.63	29.76 miles in column 6 include 20.08 due to correction of previous errors.
Shahpur Canals Division.	1893-94 1894-95 1895-96	...	...	51.26 ...	...	51.26 51.26	
Rohtak Independent Sub-Division.	1893-94 1894-95 1895-96	Nil. 95.55	Nil. ...	Nil. ...	Nil. ...	Nil. ...	
Total ...	1893-94 1894-95 1895-96	4,595.36 4,958.33 5,047.22	2,604.25 2,654.95 2,789.65	257.78 187.22 300.02	207.08 52.52 93.77	2,654.95 2,789.65 2,995.90	

STATEMENT No. V—concluded.

Progress Statement of Avenues in the Provincial Divisions for the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8
Division.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Peshāwar Division.	1893-94 1894-95 1895-96	212·00	153·47 164·48 158·30	18·37 16·82 17·67	7·66 * 22·70 9·65	164·18 158·30 166·32	7·66 miles shown in column 6 include 0·01 of a mile due to correction of previous return. * Column 6 includes 15·41 miles due to adjustment of previous errors and 7·29 miles as failures.
Rāwalpindi Division.	1893-94 1894-95 1895-96	206·64	84·01 86·23 88·52	2·22 3·01 4·41	... 0·72 2·60	86·23 88·52 90·33	
Kohāt North-West Frontier Road Division.	1893-94 1894-95 1895-96	78·51	12·33 14·82 15·90	3·53 2·03 4·86	1·04 0·95 1·98	14·82 15·90 18·78	
Gujranwāla Independent Sub-Division.	1893-94 1894-95 1895-96	90·94 90·29 90·29	90·29	 1·75	 0·25	90·29 90·29 91·79	
Jalandhar Division.	1893-94 1894-95 1895-96	148·66 148·66 144·58	86·13 88·30 92·18	10·57 5·13 5·66	8·40 1·25 5·80	88·30 92·18 92·04	
Independent Executive charge, Ferozepore.	1893-94 1894-95 1895-96	97·97 97·97 100·23	62·26 64·88 66·43	3·20 1·70 2·09	0·58 0·15 ...	64·88 66·43 68·52	
Simla Division ...	1893-94 1894-95 1895-96	224·00	...	...	...	...	
Ambāla Division	1893-94 1894-95 1895-96	153·97 187·47 190·73	117·84 119·04 142·54	18·30 28·43 7·12	17·10 4·93 4·54	119·04 142·54 145·12	Column 5 includes 28·43 miles received by transfer from the Ambāla District Local Boards and column 6 includes 4·93 miles due to correction of previous returns during 1894-95.
Delhi Division ...	1893-94 1894-95 1895-96	90·00 90·00 137·00	69·38 69·45 69·20	0·10 0·50 a 38·55	0·03 0·75 10·00	69·45 69·20 97·75	a 38·55 includes 36 miles received in transfer from Rohtak District.
Dera Ismail Khan Division.	1893-94 1894-95 1895-96	190·95	5·62 49·07 48·71	b 43·70 0·25 5·44	0·25 0·61 1·62	49·07 48·71 52·53	b Column 5 includes 20·25 miles transferred from Bannu District during 1893-94.
Dera Ghāzi Khan Division.	1893-94 1894-95 1895-96	197·50 197·50 111·63	51·75 53·80 55·55	5·30 1·75 ...	3·25 ... 0·87	53·80 55·55 54·68	c Column 5 includes 42·63 miles received by transfer from the late Amritsar Division and column 6 includes 10·46 miles transferred to the Lahore District Board during 1893-94.
Lahore Division	1893-94 1894-95 1895-96	173·00 173·50 173·50	91·62 122·44 132·97	c 52·38 18·61 4·00	21·56 8·08 11·63	122·44 132·97 125·34	
Amritsar Division	1893-94	...	42·63	...	42·63	...	42·63 miles transferred to Lahore Provincial Division, owing to the abolishment of Amritsar Division.
Multan Division	1893-94 1894-95 1895-96	31·30 33·30 33·30	23·27 22·77 25·78	0·30 d 3·01 0·05	0·80	22·77 25·78 25·83	d Column 5 includes 2 miles transferred from Jhang District during 1894-95.
Total ...	1893-94 1894-95 1895-96	1,895·44 1,930·79 1,893·36	890·60 945·27 986·37	157·97 81·24 91·60	103·30 40·14 48·94	945·27 986·37 1,029·08	

STATEMENT No. VI.

Income from Arboriculture in the Districts during the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Ave- nues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh ...	1893-94	795	92	...	737	22	1,646	
	1894-95	525	136	...	3,746	48	4,455	
	1895-96	480	...	...	1,300	26	1,806	
Multán ...	1893-94	2,256	15	...	709	46	3,026	
	1894-95	2,178	3	...	573	35	2,789	
	1895-96	2,873	215	...	700	75	3,863	
Dera Gházi Khan ...	1893-94	454	...	...	134	372	960	
	1894-95	382	...	...	91	312	785	
	1895-96	432	...	...	79	312	823	
Dera Ismail Khan...	1893-94	...	...	...	296	...	296	
	1894-95	...	...	...	459	...	459	
	1895-96	...	...	...	272	...	272	
Montgomery ...	1893-94	450	...	...	332	...	782	
	1894-95	475	...	...	542	...	1,017	
	1895-96	1,275	...	...	330	...	1,605	
Jhang ...	1893-94	677	...	292	118	...	1,087	
	1894-95	405	15	378	52	104	954	
	1895-96	705	...	1,061	127	...	1,893	
„ Municipality	1893-94	181	...	...	240	24	445	
	1894-95	201	...	...	162	...	363	
	1895-96	203	...	...	291	...	494	
Bannu ...	1893-94	374	...	1,500	376	5,225	7,475	
	1894-95	552	...	1,115	253	5,493	7,413	
	1895-96	723	...	1,766	294	6,957	9,740	
Shahpur ...	1893-94	1,442	...	...	9,181	1,781	12,404	
	1894-95	1,181	...	...	7,344	739	9,264	
	1895-96	1,694	...	...	7,304	704	9,702	
Hissár ...	1893-94	39	174	...	853	...	1,066	
	1894-95	132	1,484	...	552	...	2,168	
	1895-96	199	97	...	606	...	902	
„ Municipality	1893-94	615	...	...	92	20	727	
	1894-95	655	...	...	...	...	655	
	1895-96	451	...	...	85	...	536	
Ferozepore ...	1893-94	...	...	...	4,218	...	4,218	
	1894-95	...	...	...	4,220	...	4,220	
	1895-96	...	17	...	11,647	...	11,664	
Pesháwar ...	1893-94	198	...	...	2,249	...	2,447	
	1894-95	284	...	...	413	...	697	
	1895-96	230	...	...	559	...	789	
„ Municipality	1893-94	1,795	...	...	38	...	1,833	
	1894-95	2,344	...	...	23	...	2,367	
	1895-96	1,988	...	...	300	...	2,288	
Kohát ...	1893-94	615	...	...	...	...	615	
	1894-95	568	...	...	...	32	600	
	1895-96	875	...	...	5	72	952	
Rohtak ...	1893-94	...	...	...	1,378	157	1,535	
	1894-95	...	...	...	1,663	43	1,706	
	1895-96	...	...	...	1,139	110	1,249	
Lahore ...	1893-94	3,520	...	...	1,116	30	4,666	
	1894-95	4,011	...	...	866	149	5,026	
	1895-96	4,480	...	...	2,167	...	6,647	
„ Municipality	1893-94	6,559	...	...	...	1,906	8,465	
	1894-95	3,813	...	...	6	2,091	5,910	
	1895-96	5,241	...	...	...	1,770	7,011	
Karnál ...	1893-94	...	229	...	433	107	769	
	1894-95	...	149	...	2,619	218	2,986	
	1895-96	...	190	...	1,990	46	2,226	

STATEMENT No. VI—continued.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Jhelum ...	1893-94	686	...	...	2,210	136	3,032	
	1894-95	1,162	...	...	2,736	...	3,898	
	1895-96	893	...	...	1,911	...	2,804	
Gujranwála ...	1893-94	1,237	...	...	631	134	2,002	
	1894-95	1,177	...	...	1,231	72	2,480	
	1895-96	912	15	...	1,143	26	2,095	
Gurgáon ...	1893-94	192	65	380	4,250	1	4,888	
	1894-95	169	16	323	3,320	...	3,828	
	1895-96	404	81	370	3,353	50	4,258	
Amritsar ...	1893-94	296	82	...	2,124	15	2,517	
	1894-95	290	75	...	2,053	20	2,438	
	1895-96	270	60	...	1,935	15	2,280	
„ Municipality	1893-94	3,880	65	...	1,649	922	6,516	
	1894-95	3,658	90	...	2,529	1,542	7,819	
	1895-96	2,494	...	...	3,144	775	6,413	
Delhi ...	1893-94	...	4	1,097	597	...	1,698	
	1894-95	...	...	1,373	732	...	2,105	
	1895-96	...	...	1,521	707	...	2,228	
„ Municipality	1893-94	3,872	...	2,581	734	...	7,187	
	1894-95	5,242	...	2,965	*271	...	8,478	* Rs. 1,878 transferred to ornamental gardens.
	1895-96	5,451	...	2,892	300	...	8,643	
Jalandhar ...	1893-94	893	898	135	8,606	163	10,685	
	1894-95	739	334	616	4,522	138	6,349	
	1895-96	702	474	4,218	4,929	72	10,395	
Ludhiána ...	1893-94	250	2,628	...	8,656	...	11,534	
	1894-95	111	1,913	...	3,165	16	5,205	
	1895-96	1,584	...	...	17,208	...	18,792	
Ráwalpindi ...	1893-94	3,230	...	...	860	...	4,090	
	1894-95	3,569	...	...	928	...	4,497	
	1895-96	3,171	...	...	1,397	...	4,568	
„ Municipality	1893-94	1,753	...	...	1,024	...	2,177	
	1894-95	1,157	...	...	434	...	1,591	
	1895-96	1,964	...	...	301	...	2,265	
Gujrát ...	1893-94	86	...	4	8,966	235	9,291	
	1894-95	73	...	...	9,589	184	9,846	
	1895-96	117	...	...	12,026	239	12,382	
„ Municipality	1895-96	183	...	...	409	...	592	
Gurdáspur ...	1893-94	517	19	...	5,420	...	5,956	
	1894-95	4,913	...	...	3,997	...	8,910	
	1895-96	1,203	81	...	5,620	...	6,904	
Ambála ...	1893-94	454	...	...	6,066	...	6,520	
	1894-95	659	...	...	3,378	...	4,037	
	1895-96	549	...	...	3,521	...	4,070	
Siálkot ...	1893-94	2,293	8	...	25,663	350	28,314	
	1894-95	2,376	5	...	17,180	431	19,992	
	1895-96	2,355	...	...	23,113	338	25,806	
Hoshiárpur ...	1893-94	871	...	...	4,296	978	6,145	
	1894-95	1,017	...	...	3,166	1,644	5,827	
	1895-96	804	...	...	2,683	2,114	5,601	
Simla ...	1893-94	10,091	650	3,467	...	2,060	16,268	
	1894-95	11,140	320	2,922	...	963	15,345	
	1895-96	10,835	360	3,801	...	997	15,993	
Hazára ...	1893-94	...	134	...	12	32	178	
	1894-95	...	92	...	45	57	194	
	1895-96	...	88	...	63	129	280	
„ Municipality	1893-94	1,692	132	...	163	...	1,987	
	1894-95	2,069	137	...	355	...	2,562	
	1895-96	1,732	102	...	86	...	1,920	
Kángra ...	1893-94	198	...	...	497	...	695	
	1894-95	264	...	...	591	...	855	
	1895-96	178	...	...	423	...	601	
„ Municipality	1893-94	67	...	...	...	...	67	
	1894-95	99	...	...	...	...	99	
	1895-96	115	...	...	...	...	115	
Total ...	1893-94	51,918	5,195	9,456	1,04,924	14,716	1,86,209	
	1894-95	57,590	4,769	9,692	83,807	14,331	1,70,189	
	1895-96	57,765	1,780	15,629	1,03,466	14,827	1,93,467	

STATEMENT No. VI—continued.

Income from Arboriculture in the Canal Divisions during the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8	9
DIVISION.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bári Doáb Canal, 1st Division.	1893-94	...	...	12,581	...	...	12,581	
	1894-95	...	...	6,419	997	...	7,416	
	1895-96	543	...	9,582	535	751	11,411	
Bári Doáb Canal, 2nd Division.	1893-94	30	...	4,490	...	5,213	9,733	
	1894-95	50	...	2,500	...	3,329	5,879	
	1895-96	77	...	3,782	...	756	4,615	
Bári Doáb Canal, 3rd Division.	1893-94	...	...	5,662	...	3,053	8,715	
	1894-95	...	...	6,000	309	2,803	9,112	
	1895-96	...	...	5,000	1,604	3,302	9,906	
Upper Sutlej Division, Inundation Canals.	1893-94	...	...	7,348	...	2,362	9,650	
	1894-95	...	...	4,044	...	2,147	6,191	
	1895-96	...	...	5,051	...	2,361	7,412	
Multan Canals Division.	1893-94	66	...	...	12,577	1,576	14,219	
	1894-95	...	...	...	6,694	750	7,444	
	1895-96	...	...	...	8,111	346	8,457	
Dera Gházi Khan Division, Indus Canals.	1893-94	...	20	...	2,814	59	2,893	
	1894-95	...	...	...	1,514	68	1,582	
	1895-96	...	...	...	2,264	46	2,310	
Muzaffargarh Canals Division.	1893-94	...	...	...	4,558	...	4,558	
	1894-95	...	...	...	3,115	...	3,115	
	1895-96	...	...	...	2,294	...	2,294	
Western Jumna Canal, Karnál Division.	1893-94	516	...	...	3,294	...	3,810	
	1894-95	148	...	...	407	...	555	
	1895-96	131	...	...	2,695	...	2,826	
Western Jumna Canal, Delhi Division.	1893-94	...	...	...	9,069	...	9,069	
	1894-95	...	...	...	10,181	...	10,181	
	1895-96	...	...	...	5,874	...	5,874	
Western Jumna Canal, Hissár Division.	1893-94	...	...	2,745	...	36	2,781	
	1894-95	...	...	7,799	2	121	7,922	
	1895-96	...	...	4,060	16	20	4,096	
Sirhind Canal, Ferozepore Division.	1893-94	...	...	13	...	2,602	2,615	
	1894-95	...	...	113	...	3,151	3,264	
	1895-96	...	...	144	...	3,707	3,851	
Sirhind Canal, Ludhiána Division.	1893-94	...	...	6,954	...	8,373	15,327	
	1894-95	...	...	2,305	...	5,958	8,263	
	1895-96	...	...	4,456	...	8,758	13,214	
Sirhind Canal, Patiála Division.	1893-94	...	...	878	...	2,699	3,577	
	1894-95	...	...	526	2	2,031	2,559	
	1895-96	...	...	390	...	3,165	3,555	
Chenáb Canal, 1st Division.	1893-94	...	...	31	...	290	321	
	1894-95	...	...	10	...	113	123	
	1895-96	...	...	525	...	63	588	
Chenáb Canal, 2nd Division.	1893-94	...	...	...	...	...	...	
	1894-95	...	...	80	...	...	80	
	1895-96	...	...	213	...	...	213	
Chenáb Canal, 3rd Division.	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1894-95							
	1895-96							
Chenáb Canal, 4th Division.	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1894-95							
	1895-96							
Swát River Canal Division.	1893-94	...	...	92	...	165	257	
	1894-95	...	...	87	...	31	118	
	1895-96	...	...	319	...	21	340	
Shahpur Canals Division.	1893-94	...	...	...	...	...	...	
	1894-95	...	...	...	3,054	92	3,146	
	1895-96	...	...	...	1,209	24	1,233	
Rohtak Independent Sub-Division.	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1894-95							
	1895-96							
Total	1893-94	612	20	40,794	32,312	26,368	1,00,106	
	1894-95	198	...	29,883	26,275	20,594	76,950	
	1895-96	751	...	33,522	24,602	23,320	82,195	

STATEMENT No. VI—concluded.

Income from Arboriculture in the Provincial Divisions during the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8	9
DIVISION.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Pesháwar Division	1893-94	...	...	...	488	522	1,010	
	1894-95	...	...	...	547	201	748	
	1895-96	...	2	...	661	383	1,046	
Ráwalpindi Division	1893-94	...	...	...	826	1,515	2,341	
	1894-95	...	...	...	536	1,899	2,435	
	1895-96	32	...	...	1,425	1,642	3,099	
Kohát North-West Frontier Road Di- vision.	1893-94	...	...	...	...	...	...	
	1894-95	...	...	...	27	...	27	
	1895-96	...	...	...	16	...	16	
Gujránwála Inde- pendent Sub-Divi- sion.	1893-94	150	...	...	3,092	2,958	6,200	
	1894-95	120	...	...	3,673	2,729	6,522	
	1895-96	152	...	...	1,976	1,972	4,100	
Jalandhar Division	1893-94	...	...	...	3,446	3,030	6,476	
	1894-95	...	...	...	581	1,302	1,883	
	1895-96	...	...	...	6,588	1,191	7,779	
Independent Execu- tive charge, Fe- rozepore.	1893-94	...	...	...	1,579	3,038	4,617	
	1894-95	...	...	...	556	1,066	1,622	
	1895-96	...	...	491	462	1,049	8,002	
Simla Division ...	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1894-95							
	1895-96							
Ambála Division ...	1893-94	...	...	...	3,902	989	4,891	
	1894-95	...	...	...	3,532	2,300	5,832	
	1895-96	...	...	...	5,739	2,092	7,831	
Delhi Division ...	1893-94	...	...	...	821	675	1,496	
	1894-95	...	...	...	285	797	1,082	
	1895-96	...	...	...	185	666	851	
Dera Ismail Khan Division.	1893-94	...	...	27	40	116	183	
	1894-95	19	...	*135	74	30	258	* Rs. 36 transferred to groves and avenues.
	1895-96	56	...	78	317	23	474	
Dera Gházi Khan Division.	1893-94	...	...	...	323	...	323	
	1894-95	...	...	...	276	...	276	
	1895-96	...	...	...	696	...	696	
Lahore Division ...	1893-94	59	...	...	5,027	3,243	8,329	
	1894-95	67	...	...	3,109	3,157	6,333	
	1895-96	98	...	...	3,560	1,323	4,981	
Amritsar Division ..	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1894-95							
	1895-96							
Multan Division ...	1893-94	...	...	...	29	...	29	
	1894-95	...	...	...	4	...	4	
	1895-96	...	...	...	11	...	11	
Total ...	1893-94	209	...	27	19,573	16,066	35,895	
	1894-95	206	...	135	13,200	13,481	27,022	
	1895-96	338	2	569	27,636	10,341	38,896	

STATEMENT No. VII.

Expenditure on Arboriculture in the Districts during the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	Year.	WORKS.								ESTAB- LISH- MENT.	TOTAL.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.		General Supervising Establishment, including Office Establishment.	
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh	1893-94	4,020	...	76	...	...	...	3,482	511	...	8,089
	1894-95	2,467	...	72	...	...	...	3,361	296	...	6,196
	1895-96	3,192	...	...	...	...	...	3,386	360	...	6,938
Multan	1893-94	8,034	...	613	...	...	...	3,763	...	...	12,410
	1894-95	8,665	...	543	...	...	...	4,032	440	...	13,680
	1895-96	7,858	...	336	...	...	...	4,046	100	...	12,340
Dera Gházi Khan	1893-94	5,080	...	70	...	313	...	1,352	...	120	6,935
	1894-95	4,475	...	70	...	344	...	1,352	...	120	6,361
	1895-96	4,848	...	70	...	312	...	1,332	...	120	6,682
Dera Ismail Khan	1893-94	512	...	...	71	...	...	4,167	165	...	4,915
	1894-95	507	...	36	143	...	...	4,108	200	...	4,994
	1895-96	520	...	200	...	...	...	3,805	100	60	4,685
Montgomery	1893-94	2,178	...	...	...	...	...	653	...	...	2,831
	1894-95	2,354	...	...	...	...	...	922	...	...	3,276
	1895-96	4,987	...	...	...	...	...	662	200	...	5,849
Jhang	1893-94	2,424	...	...	...	180	...	1,663	...	180	4,447
	1894-95	1,925	...	...	...	...	...	2,040	...	132	4,097
	1895-96	3,256	...	700	...	101	...	936	...	30	5,023
„ Municipality	1893-94	1,448	...	...	...	...	...	405	...	60	1,913
	1894-95	1,095	...	...	...	...	...	395	...	28	1,518
	1895-96	1,246	...	...	...	...	...	332	...	13	1,591
Bannu	1893-94	1,478	...	85	...	240	...	1,718	...	627	4,148
	1894-95	1,370	...	...	...	240	...	1,219	...	463	3,292
	1895-96	1,348	...	...	...	240	...	1,386	...	444	3,418
Shahpur	1893-94	1,032	312	80	20	...	...	545	5,640	900	8,529
	1894-95	1,116	400	120	5	...	...	720	4,721	872	7,954
	1895-96	1,041	300	80	20	...	...	546	2,379	2,608	6,974
Hissár	1893-94	2,670	...	2,496	...	300	200	2,664	...	...	8,330
	1894-95	3,698	...	1,321	...	432	...	2,016	...	...	7,469
	1895-96	2,646	...	1,188	...	...	...	1,854	...	...	5,688
„ Municipality	1893-94	4,359	...	...	...	...	...	486	...	...	4,845
	1894-95	1,466	...	...	...	...	...	229	...	...	1,695
	1895-96	1,987	...	...	...	...	...	24	...	...	2,230
Ferozepore	1893-94	...	...	...	...	...	...	5,361	300	756	6,417
	1894-95	...	...	...	...	...	...	7,701	...	756	8,457
	1895-96	...	...	...	1,200	...	...	9,727	400	1,116	12,443
Pesháwar	1893-94	2,262	...	...	...	...	...	8,769	112	...	11,143
	1894-95	2,263	...	...	...	...	...	8,820	575	...	11,658
	1895-96	1,911	...	...	...	...	...	9,033	253	...	11,197

STATEMENT No. VII—continued.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	Year.	WORKS.								ESTABLISHMENT. General Supervising Establishment, including Office Establishment.	TOTAL.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.			
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Pesháwar Municipality	1893-94	2,716	...	...	...	...	...	217	...	...	2,933
	1894-95	3,004	...	...	...	...	...	120	...	...	3,124
	1895-96	3,019	...	...	...	...	...	72	...	...	3,091
Kohát	1893-94	1,025	...	20	10	...	...	672	274	...	2,001
	1894-95	864	...	65	155	...	...	1,248	1,005	200	3,537
	1895-96	814	...	100	130	...	...	771	559	276	2,650
Rohtak	1893-94	...	...	486	203	...	...	4,574	73	88	5,424
	1894-95	...	...	307	...	...	...	3,328	119	80	3,834
	1895-96	...	...	106	...	...	...	4,403	87	...	4,596
Lahore	1893-94	4,931	...	...	...	...	...	3,682	2,122	...	10,735
	1894-95	4,103	...	19	...	...	...	1,214	940	2,951	9,227
	1895-96	3,128	...	...	...	...	...	965	...	3,049	7,142
„ Municipality	1893-94	17,133	...	24	...	...	...	1,216	...	1,440	19,813
	1894-95	19,998	451	24	...	...	...	2,445	...	120	23,038
	1895-96	19,900	430	16	...	...	...	1,561	...	792	22,699
Karnál	1893-94	...	...	488	...	...	...	3,301	...	624	4,413
	1894-95	...	...	657	...	...	...	2,853	30	684	4,224
	1895-96	...	...	591	...	...	...	3,329	210	684	4,814
Jhelum	1893-94	3,401	...	...	...	...	...	...	...	2,675	6,076
	1894-95	2,673	74	...	...	...	...	...	...	2,568	5,315
	1895-96	2,917	...	...	...	...	...	...	...	3,080	5,997
Gujránwála	1893-94	2,650	160	1,746	...	...	...	3,117	400	432	8,505
	1894-95	2,722	...	878	45	...	...	3,567	1,225	459	8,896
	1895-96	2,751	...	828	...	...	...	4,247	...	429	8,255
Gurgáon	1893-94	716	...	1,073	...	608	...	4,526	...	564	7,487
	1894-95	501	...	648	...	1,186	...	4,366	...	684	7,385
	1895-96	668	...	278	...	720	...	3,312	...	...	4,978
Amritsar	1893-94	583	...	290	...	...	...	5,292	411	988	7,564
	1894-95	572	...	202	110	...	...	4,889	338	988	7,159
	1895-96	630	...	234	60	...	...	5,289	402	980	7,595
„ Municipality	1893-94	14,316	...	176	...	47	...	1,474	68	1,464	17,545
	1894-95	11,870	...	292	...	60	...	1,474	200	1,664	15,560
	1895-96	13,908	...	192	...	...	...	1,666	...	1,320	17,086
Delhi	1893-94	188	...	229	3	797	47	2,625	133	601	4,623
	1894-95	188	...	220	12	586	13	2,190	92	638	3,939
	1895-96	199	...	182	...	387	2	1,915	320	435	3,440
„ Municipality	1893-94	9,098	...	...	...	532	...	1,447	...	...	11,077
	1894-95	9,501	...	...	...	525	...	1,102	...	...	11,128
	1895-96	8,508	...	...	...	525	...	928	...	...	9,961

STATEMENT No. VII—continued.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	Year.	WORKS.								ESTABLISHMENT. General Supervising Establishment, including Office Establishment.	TOTAL.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.			
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Jalandhar	1893-94	2,500	...	1,083	...	...	...	3,465	591	...	7,689
	1894-95	2,025	...	1,281	...	80	...	3,687	...	...	7,073
	1895-96	2,220	...	1,169	...	60	...	3,848	...	...	7,297
Ludhiána	1893-94	1,450	...	2,993	...	...	...	3,500	...	201	8,144
	1894-95	1,075	...	2,846	...	...	...	2,905	5	108	6,939
	1895-96	2,869	84	...	...	...	...	3,136	20	...	6,109
Ráwalpindi	1893-94	1,467	...	...	...	...	...	355	...	...	1,822
	1894-95	1,460	...	...	...	...	...	315	...	...	1,775
	1895-96	1,384	...	...	...	...	...	318	...	...	1,702
" Municipality...	1893-94	2,041	...	675	...	...	...	337	...	257	3,310
	1894-95	2,302	...	440	...	...	...	383	...	300	3,425
	1895-96	2,331	...	...	...	...	...	126	...	300	2,757
Gujrát	1893-94	955	...	110	...	...	...	...	2,770	480	4,315
	1894-95	1,456	...	107	...	...	...	...	3,430	480	5,473
	1895-96	1,064	...	...	60	...	...	...	3,488	480	5,092
" Municipality	1895-96	342	98	...	...	...	...	...	55	...	495
Gurdáspur	1893-94	2,177	...	263	...	...	...	5,685	...	...	8,125
	1894-95	1,937	...	602	...	...	...	5,870	...	...	8,409
	1895-96	2,118	...	298	...	...	...	5,570	...	...	7,986
Ambála	1893-94	3,646	...	...	...	...	...	3,600	1,128	...	8,374
	1894-95	3,544	...	...	...	...	...	3,860	...	...	7,404
	1895-96	1,897	...	...	...	...	...	1,736	1,000	...	4,633
Sialkot	1893-94	2,904	...	744	...	...	...	2,885	2,554	2,048	11,135
	1894-95	3,097	...	616	...	...	...	3,982	1,820	2,034	11,549
	1895-96	2,835	...	652	...	...	...	3,511	2,744	2,088	11,830
" Municipality	1895-96	60	...	...	...	...	60	180	...	...	300
Hoshiárpur	1893-94	1,191	...	288	...	...	...	5,902	...	380	7,761
	1894-95	1,334	...	288	...	...	...	5,729	...	390	7,741
	1895-96	1,170	...	288	...	...	...	6,733	...	875	9,066
Simla	1893-94	5,542	...	801	500	2,047	150	...	...	4,690	13,730
	1894-95	6,402	...	865	...	2,351	200	157	...	5,134	15,109
	1895-96	6,422	...	536	...	1,925	...	...	...	4,757	13,640
Hazára	1893-94	120	...	336	...	216	...	72	...	...	744
	1894-95	120	...	306	...	216	...	72	...	...	714
	1895-96	120	...	261	...	216	...	72	...	...	669
" Municipality	1893-94	1,738	...	...	...	...	...	...	...	...	1,738
	1894-95	1,862	...	...	...	...	...	...	...	...	1,862
	1895-96	1,823	...	...	...	...	...	...	...	...	1,823
Kángra	1893-94	809	...	310	...	...	...	2,202	618	252	3,891
	1894-95	754	...	...	...	...	...	2,163	...	252	3,169
	1895-96	758	...	...	...	...	...	961	...	252	1,971
" Municipality	1893-94	235	18	...	...	...	...	...	...	281	534
	1894-95	222	...	...	...	...	...	...	...	286	508
	1895-96	242	...	...	...	...	36	...	...	308	586
Total	1893-94	1,19,029	490	15,555	807	5,280	397	95,174	17,570	20,108	2,74,410
	1894-95	1,14,987	925	12,825	470	6,020	213	94,836	15,496	22,391	2,68,163
	1895-96	1,18,937	912	8,305	1,470	4,486	98	91,937	12,677	24,496	2,63,318

STATEMENT No. VII—continued.

Expenditure on Arboriculture in the Canal Divisions during the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	Year.	WORKS.								ESTABLISHMENT. General Supervising Establishment, including Office Establishment.	TOTAL.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.			
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Bári Doáb Canal, 1st Division.	1893-94	...	...	...	...	2,557	981	366	...	...	3,904
	1894-95	...	...	...	...	1,882	1,137	497	...	600	4,116
	1895-96	...	...	...	...	2,056	2,171	...	90	...	4,317
Bári Doáb Canal, 2nd Division.	1893-94	144	...	...	...	1,980	1,734	...	...	...	3,858
	1894-95	100	...	...	...	2,112	...	...	...	...	2,212
	1895-96	136	...	...	...	811	...	...	...	...	947
Bári Doáb Canal, 3rd Division.	1893-94	...	...	...	...	3,405	...	...	...	...	3,405
	1894-95	367	...	...	...	558	...	500	...	...	1,425
	1895-96	...	...	...	...	167	89	102	...	...	358
Upper Sutlej Division, Inundation Canals.	1893-94	...	...	...	...	2,629	...	...	...	...	2,629
	1894-95	...	...	...	...	3,532	...	...	...	...	3,532
	1895-96	...	...	...	...	3,401	...	...	...	...	3,401
Multan Canals Division	1893-94	...	70	66	38	2,343	10	1,898	700	...	5,125
	1894-95	...	...	394	30	1,380	...	2,898	1,838	...	6,540
	1895-96	...	...	420	20	1,500	...	3,542	200	...	5,682
Dera Gházi Khan Division, Indus Canals.	1893-94	...	...	339	...	...	...	2,343	205	18	2,905
	1894-95	...	...	...	...	573	...	1,608	...	44	2,225
	1895-96	...	...	339	...	99	...	1,637	...	18	2,093
Muzaffargarh Canals Division.	1893-94	...	...	...	...	...	...	1,544	...	...	1,544
	1894-95	...	...	...	...	...	...	1,936	...	...	1,936
	1895-96	...	...	...	...	...	...	1,242	...	...	1,242
Western Jumna Canal, Karnál Division.	1893-94	936	659	374	56	63	445	2,058	2,966	...	7,557
	1894-95	1,504	...	1,129	64	...	385	1,953	...	...	5,035
	1895-96	2,680	...	854	...	381	200	1,177	98	...	5,390
Western Jumna Canal, Delhi Division.	1893-94	2,818	...	944	50	235	210	922	801	...	5,980
	1894-95	1,375	...	...	768	1,620	157	287	111	...	4,318
	1895-96	1,809	...	...	...	1,477	...	973	165	...	4,424
Western Jumna Canal, Hissár Division.	1893-94	475	...	421	172	...	242	1,193	2,290	...	4,798
	1894-95	836	...	418	618	...	240	1,451	2,935	76	6,569
	1895-96	498	...	1,046	...	...	278	2,659	1,002	143	5,626
Sirhind Canal, Ferozepore Division.	1893-94	1,034	...	...	170	7,976	2,915	392	46	...	12,533
	1894-95	...	...	...	3	6,769	...	479	...	...	7,251
	1895-96	...	...	144	...	8,967	952	167	...	...	10,230
Sirhind Canal, Ludhiána Division.	1893-94	...	...	1,058	213	1,648	1,386	1,750	455	...	6,510
	1894-95	...	...	1,170	300	2,840	1,050	1,335	323	...	7,018
	1895-96	...	...	1,620	116	2,002	1,444	1,065	1,070	...	7,317
Sirhind Canal, Patiala Division.	1893-94	...	...	193	...	7,918	...	...	147	...	8,258
	1894-95	...	...	493	...	6,334	65	27	163	...	7,082
	1895-96	...	...	480	...	6,178	501	6	71	...	7,236
Chenáb Canal, 1st Division.	1893-94	...	...	510	...	...	1,054	...	743	965	3,272
	1894-95	...	...	50	...	1,460	908	540	688	...	3,646
	1895-96	...	...	200	100	1,200	1,077	...	666	1,000	4,243
Chenáb Canal, 2nd Division.	1893-94	...	...	...	2,030	...	3,015	...	1,103	...	6,148
	1894-95	...	...	...	3,009	...	2,535	...	2,310	...	7,854
	1895-96	...	...	1,506	432	2,343	4,329	2,506	399	...	11,515
Chenáb Canal, 3rd Division.	1893-94	...	...	...	...	...	...	...	...	...	...
	1894-95	...	...	...	...	...	...	...	...	...	...
	1895-96	...	...	...	...	...	...	...	...	...	...
Chenáb Canal, 4th Division.	1893-94	...	...	...	...	...	690	...	...	...	690
	1894-95	...	32	...	325	...	...	...	...	...	357
	1895-96	...	...	...	...	...	854	...	...	...	854
Swát River Canal Division.	1893-94	...	...	...	...	3,564	...	...	...	...	3,564
	1894-95	...	...	...	...	3,585	...	...	...	...	3,585
	1895-96	...	...	...	...	5,420	...	23	...	...	5,443
Shahpur Canals Division	1893-94	...	...	...	...	...	...	...	...	...	...
	1894-95	...	...	...	...	...	...	...	...	...	...
	1895-96	...	...	...	...	...	...	205	...	...	205
Rohtak Independent Sub-Division.	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
	1894-95	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
	1895-96	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
Total	1893-94	5,407	729	3,905	2,729	34,318	12,682	12,466	9,456	983	82,675
	1894-95	4,182	32	3,649	5,117	32,645	6,477	13,511	8,368	720	74,701
	1895-96	5,123	...	6,609	668	36,002	11,895	15,304	3,761	1,161	80,523

STATEMENT No. VII—concluded.

Expenditure on Arboriculture in the Provincial Divisions during the years 1893-94 to 1895-96.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	Year.	WORKS.								ESTABLISHMENT.	TOTAL.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.		General Supervising Establishment, including Office Establishment.	
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Pesháwar Division	1893-94	...	...	309	...	...	...	2,707	497	2,258	5,771
	1894-95	...	...	725	150	...	...	2,785	1,689	920	6,269
	1895-96	84	...	434	312	...	...	2,388	1,360	821	5,399
Ráwalpindi Division	1893-94	72	...	180	3	...	...	4,112	95	...	4,462
	1894-95	72	...	240	4	...	...	3,645	168	...	4,129
	1895-96	120	...	240	...	...	...	4,543	100	...	5,003
Kohát North-West Frontier Road Division.	1893-94	...	...	...	216	...	...	1,844	678	...	2,738
	1894-95	...	...	288	296	...	...	1,218	346	...	2,148
	1895-96	...	...	...	...	...	...	1,737	460	...	2,197
Gujránwála Independent Sub-Division.	1893-94	...	...	...	...	...	...	2,278	...	...	2,278
	1894-95	...	...	...	86	...	...	* 2,080	...	...	2,166
	1895-96	...	...	...	45	...	...	2,123	...	...	2,168
Jalandhar Division	1893-94	...	...	20	255	...	...	353	669	664	1,961
	1894-95	...	...	...	20	...	...	1,022	495	320	1,857
	1895-96	...	...	153	85	...	...	591	333	330	1,492
Independent Executive charge, Ferozepore.	1893-94	...	...	458	100	...	...	1,546	482	...	2,586
	1894-95	...	...	90	57	...	...	1,671	315	...	2,133
	1895-96	...	...	233	...	...	...	1,274	...	...	1,507
Simla Division	1893-94	4,518	...	...	...	...	...	...	...	...	4,518
	1894-95	4,576	...	...	...	...	...	...	...	...	4,576
	1895-96	5,199	...	120	...	500	234	...	...	...	6,053
Ambála Division	1893-94	...	...	...	...	...	...	2,316	...	...	2,316
	1894-95	...	...	...	...	...	...	1,892	...	...	1,892
	1895-96	...	...	...	272	...	...	1,020	249	...	1,541
Delhi Division	1893-94	...	...	...	...	...	...	1,660	10	300	1,970
	1894-95	...	...	...	...	...	...	150	...	...	150
	1895-96	...	...	...	...	...	...	1,619	...	...	1,619
Dera Ismail Khan Division.	1893-94	...	...	184	8	...	...	1,857	90	332	2,471
	1894-95	...	...	...	36	...	...	+ 891	...	+ 1,016	1,943
	1895-96	100	62	20	10	681	200	222	3	874	2,172
Dera Gházi Khan Division.	1893-94	...	...	30	50	...	...	1,913	447	84	2,524
	1894-95	...	...	30	...	...	...	2,470	210	...	2,710
	1895-96	...	...	30	...	...	...	2,613	...	...	2,643
Lahore Division	1893-94	247	48	150	155	...	...	4,340	520	...	5,460
	1894-95	288	...	200	90	...	...	4,332	149	...	5,059
	1895-96	288	...	200	60	...	...	3,328	100	...	3,976
Amritsar Division	1893-94	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
	1894-95	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
	1895-96	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
Multán Division	1893-94	...	...	78	60	...	...	1,107	72	115	1,432
	1894-95	...	...	80	...	...	...	1,508	180	160	1,928
	1895-96	...	...	91	...	...	...	1,722	9	70	1,892
Total	1893-94	4,837	48	1,409	847	...	...	26,033	3,560	3,753	40,487
	1894-95	4,936	...	1,653	739	...	...	23,664	3,552	2,416	36,960
	1895-96	5,791	62	1,521	784	1,181	434	23,180	2,614	2,095	37,662

* Rs. 86 transferred from Column 9 to Column 6.

† Rs. 868 omitted in the annual statement.

‡ Rs. 1,016 omitted in the annual statement.

APPENDIX I.

Statement of trees counted at the close of 1895-96 in certain Canal Divisions.

CANAL OR BRANCH.	NUMBER OF TREES.																		TOTAL.			
	Shehar.						Kikar.						Tán.								Others.	
	Classes.						Classes.						Classes.									
	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Bari Doab Canal, 1st Division.																						
1. Main Line	13,956	12,198	25,298	1,072	2,496	5,474	1,756	893	1,031	361	212	435	14,493	15,416	32,049	31,638	31,215	64,285	127,138	356		
2. Main Branch Upper	1,318	7,103	4,677	21	134	264	12	30	16	2	91	243	584	3,308	5,636	1,937	10,666	10,836	23,439	17		
3. Kasur Branch	119	8,280	25,018	86	2,337	5,883	...	...	1	...	5	97	43	3,315	9,989	248	13,937	40,988	55,173	...		
4. Sohrón Branch	186	659	13,761	105	3,459	7,198	...	3	...	...	...	33	17	1,243	9,356	308	5,364	39,348	36,020	...		
5. Distributaries	1,687	1,881	2,452	320	667	2,211	...	263	118	...	...	382	1,787	1,748	2,404	4,259	5,166	7,567	16,992	58		
6. Escapes	4	...	2	3	1	2	...	...	...	...	...	...	9	8	98	16	9	102	127	...		
7. Miscellaneous	244	312	512	15	32	45	...	52	...	40	123	...	235	356	940	568	875	1,870	3,313	...		
Total 1896	17,514	30,433	71,718	1,622	9,126	21,077	2,046	1,241	1,254	624	1,038	1,475	17,168	25,394	60,472	38,974	67,232	155,996	262,202	432		
CANAL.																						
Bari Doab Canal, 2nd Division.																						
Main Branch Lower	1,042	4,472	5,610	62	479	1,335	1	24	30	1	20	4	106	998	1,765	1,212	5,993	8,744	15,949	...		
Lahore Branch	2,814	11,098	9,419	852	2,734	4,782	...	7	...	8	28	234	1,938	6,286	9,443	5,612	20,153	23,878	49,643	23		
Main Branch Upper	21	34	32	2	2	5	...	1	42	...	...	...	...	...	...	24	46	113	183	...		
DISTRIBUTARIES.																						
Main Branch Lower	165	293	166	18	192	684	...	...	...	2	24	41	32	121	575	217	630	1,466	2,313	...		
Lahore Branch	2,115	3,885	2,283	1,080	2,895	3,986	...	1	...	2	12	70	2,131	4,397	3,943	5,330	11,190	10,285	26,805	...		
Kirn Escape	60	311	84	22	1,201	665	...	...	...	...	...	...	20	322	160	102	1,834	909	2,845	...		
Shálamár	...	1	4	...	22	64	...	...	...	...	...	...	...	...	...	...	23	68	91	...		
Níáz Beg	...	40	257	...	4	51	...	...	...	...	...	...	...	...	64	...	68	372	440	...		
Total 1896	6,217	20,134	17,855	2,036	7,529	11,572	3	33	75	13	84	349	4,223	12,157	15,984	12,497	39,937	45,835	98,269	24		
Total 1893	7,102	33,239	20,334	2,904	8,814	9,109	9	9	9	34	161	144	3,243	10,112	12,453	13,292	52,335	42,049	107,676	19		
Increase or decrease	-885	-13,105	-2,479	-868	-1,285	+2,463	-6	+24	+66	-21	-77	+205	+935	+2,045	+3,531	-795	-12,398	+3,786	-9,407	+5		

[illegible]

1st Division, Chenab Canal.

[illegible]

2nd Division, Chenab Canal.

[illegible]

PROGRESS REPORT
OF THE
ARBORICULTURE IN THE PUNJAB

FOR THE THREE YEARS 1896-97 TO 1898-99.

Published by Authority.



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1899.

READ—

The Report on Arboriculture in the Punjab during the years 1896-97 to 1898-99, submitted by the Conservator of Forests, Punjab, with his letter No. 1995, dated the 27th of September 1899.

REMARKS.—This is the fifth triennial Progress Report on Arboriculture and it deals with the years 1896-97 to 1898-99. The arrangement of the subjects in the report is the same as in previous reports, that is to say the progress of arboriculture has been treated separately according as it is due to action on the part of District Agency, private persons, the Irrigation Department, and the Public Works Department on provincial roads. Under each head the work has been classed as work done on avenues, groves, plantations and nurseries.

2. Before, however, proceeding to review the report in detail His Honor the Lieutenant-Governor has to draw attention to the fact that the district returns have in many cases been submitted late. Further the returns have not been prepared with that accuracy which would enable the Conservator of Forests to incorporate them in his report without intermediate correspondence of considerable length. The Conservator of Forests draws attention to the class of subordinates who are placed in charge of arboricultural operations by District Officers. His Honor the Lieutenant-Governor agrees with the Conservator that, when it is possible, the services of trained men from the Forest School at Dehra Dún should be secured, and in all districts where Forest Officers are located the co-operation of these officers should be invited, and where possible the actual work done should be placed under their supervision. With these preliminary remarks His Honor proceeds to review the report in detail.

3. The climatic conditions of the period under report varied to a considerable extent. In 1896-97 the rainfall was below the average in every district in the Province with the sole exception of Bannu. The year 1897-98 was characterized by an excess of rain in almost all the arid and very dry districts and by a deficit in most of the dry and fairly moist districts. On the whole it may be said that half the districts had a rainfall above the average and half below. In 1898-99 the rainfall was below the average in all districts with the exception of five.

4. The following table shows the length of roadside and canal avenues which were in existence at the end of the triennial period now under report and that which ended with the year 1895-96:—

	At the close of 1895-96.	At the close of 1898-99.	Length of roads and canals suitable for avenues.
	Miles.	Miles.	Miles.
Under District Agency	7,261	7,676	13,273
Under Irrigation Department	2,996	3,580	6,455
Under Public Works Department Provincial Roads ..	1,029	1,088	1,744
Total	11,286	12,344	21,472

The above figures show that there has been a net increase in the mileage of avenues of 1,058 miles. During the triennial period now under

review 3,272 miles of avenues were planted under the agencies detailed in the foregoing table. Of the 3,272 miles planted 2,214 miles are shown as having failed. During the previous triennial period only 2,141 miles of avenues were planted, but of these only 1,279 miles are returned as failed. Thus the net increase of mileage is not so high a percentage of the mileage planted as the percentage of the previous triennial period, but the increase of 50 per cent. in the number of miles planted is satisfactory. The figures noted in the

District. *Net increase in
mileage planted.*

Peshāwar 142
Siālkot 33
Jhang 42

margin show the districts in which tree planting along the district roads met with the greatest success. In many districts a very large proportion of the area planted is returned as failed. In most cases this was due to a deficient rainfall. Notable instances are the districts of Amritsar, in which 62.49 miles of avenues were planted, of which 57.43 miles failed, and Delhi in which 49.74 miles of avenues were planted and 39.54 miles failed. In Gujrāt 20.52 miles were planted and 32.57 miles failed. In Umballa 29.95 miles were planted and as many as 45.59 failed.

5. A most satisfactory increase is noticeable in the total mileage of roads and canals successfully planted up during the triennial period by the Irrigation Department. This increase amounted to 584.73 miles as compared with 391.65 miles during the previous triennial period. The net increase of mileage on Provincial roads is not so large, being 36.03 miles against 82.56 miles during the previous triennial period.

6. The following table shows the areas under groves and plantations at the beginning and the end of the period now under report :—

	GROVES.		PLANTATIONS.	
	At end of 1895-96.	At end of 1898-99.	At end of 1895-96.	At end of 1898-99.
	Acres.	Acres.	Acres.	Acres.
Under District Boards and Municipal Committees ...	5,497	5,132	3,512	3,014
Under Irrigation Department ...	<i>Nil.</i>	<i>Nil.</i>	17,394	18,744
Under Public Works Department Provincial Roads ...	1,156	1,159	156	158
Total ...	6,653	6,291	21,062	21,916

In the area under groves there is therefore a net decrease of 362 acres, while the increase in the area under plantations amounts to 854 acres. The decrease in the area under groves is partly accounted for by the transfer of 150 acres in the Shahpur District to the Forest Department. The decrease in the Ludhiāna District, 177 acres, is due to trees having been sold and areas leased for cultivation. The experiment of establishing a timber depôt at the head-quarters of this district proved a failure. In the Jullundur District the area of plantations has been increased by 28.18 acres, being the area which was washed away by the Sutlej River in 1895-96 and 1896-97, but subsequently recovered owing to the river changing its course and which has now been sown. Otherwise the increase in plantations and groves under the charge of any District Board or Municipal Committee is inconsiderable. The area under plantations in the charge of the Irrigation Department again shows a large increase. For the previous period the increase was 903 acres. The present report shows that an area of 1,350 acres has been added to the plantations under the charge of this Department.

7. The area occupied by nurseries under the management of District Boards shows a decrease of 26.40 acres. From this, however, deductions must be made on account of corrections of previous returns and transfers. There is,

when these are taken into consideration, a net increase of 9.40 acres. The area under nurseries in the charge of the Irrigation Department decreased by 13.41 acres, and that under the Public Works Department Provincial Roads decreased by 2.70 acres.

8. The cultivation of fruit trees in Government gardens was not attended with great success during the period under report. In the Jhang gardens the grape vines were not very successful, and a large number of mango trees were destroyed by frost. The fruit gardens at Dera, Leiah and Bhakkar in the Dera Ismail Khan District suffered from want of rain in 1898-99. The Rámábágh garden in Amritsar brings in a steadily increasing revenue, and it is hoped that in time the garden will be wholly selfsupporting. The sale of plants, fruit and vegetables alone yielded an income of Rs. 8,086 during the period under report. In the Ludhiána District there is a fruit garden which is in a flourishing condition, yielding an income of Rs. 400 per annum, while the annual expenditure on its maintenance is only Rs. 240. In the Siálkot District successful experiments have been carried out with cuttings of the American vine which were obtained from the Simla gardens some years ago, and also with the Egyptian date palm. In the Hoshiárpur District experiments were carried out with marram grass, the roots of which are obtained from Australia in a dry condition. The experiments conducted show that the grass thrives well if carefully watered.

9. The following statement shows the financial results of the period under report for District Boards and Municipal Committees as compared with the four preceding triennial periods :—

1					2	3	4	5
Period.					Income.	Expenditure.	Surplus.	Deficit.
					Rs.	Rs.	Rs.	Rs.
1884-85 to 1886-87	...	...	...	...	1,92,874	4,36,519	...	2,43,645
1887-88 to 1889-90	...	...	...	...	3,64,145	7,05,868	...	3,41,723
1890-91 to 1892-93	...	...	...	...	5,25,320	8,29,574	...	3,04,254
1893-94 to 1895-96	...	...	...	...	5,49,865	8,05,891	...	2,56,026
1896-97	...	...	...	...	1,96,365	2,77,263	...	80,898
1897-98	...	...	...	...	1,85,416	2,65,825	...	80,409
1898-99	...	...	...	...	1,64,362	2,57,099	...	92,737
1896-97 to 1898-99	...	...	...	...	5,46,143	8,00,187	...	2,54,044

There is nothing calling for notice in connection with these figures. The deficit is Rs. 2,54,044, or nearly Rs. 2,000 less than in the previous period. The highest revenue was derived from the Siálkot, Simla and Ludhiána Districts and the Amritsar, Lahore and Delhi Municipalities. The highest expenditure was incurred in the Lahore and Amritsar Municipalities and in the Siálkot, Mooltan and Ferozepore Districts.

10. Turning to the development of arboriculture by private persons, the greatest interest seems to be taken in the Siálkot District. The district contains a large number of plantations and market gardens, and there is a noticeable

improvement in the class of vegetables produced. In many other districts where the zamíndárs have manifested any interest in fruit growing a large number of trees have been distributed, and the distribution has given a considerable impetus to the cultivation of fruit trees throughout the Province.

ORDER.—Ordered that the above remarks be printed and circulated with the Report as usual; also that they be published in the *Punjab Government Gazette* and forwarded with the usual number of copies of the Report to the Government of India, Revenue and Agricultural Department; also that they be forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, and the Conservator of Forests, Punjab.

By order of the Hon'ble the Lieutenant-Governor,

A. H. DIACK,

Revenue and Financial Secretary to Government, Punjab.

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No. 1995.

FOREST DEPARTMENT, PUNJAB.

FROM

C. F. ELLIOTT, Esquire,
Conservator of Forests,
PUNJAB,

TO

THE REVENUE AND FINANCIAL SECRETARY TO
GOVERNMENT, PUNJAB.

Dated Lahore, the 27th September 1899.

SIR,

I have the honor to submit the Progress Report on Arboriculture in the Punjab for the three years 1896-97 to 1898-99. The arrangement of the subjects is the same as in previous reports.

2. Out of 58 reports, 14 were received late, of which 7 were more than a month late. As usual a large amount of correspondence has been required to get the returns correct.

3. I would again draw attention to the fact that the assistance and advice of Forest Officers is not sufficiently utilised by District Officers and others who have the control of arboricultural operations.

The same mistakes are perpetuated from year to year; the ignorance and apathy of the subordinates remain unabated. It stands to reason that plantations cannot succeed as they ought, considering the money spent on them, when the men entrusted with the work have been appointed solely because they happen to be related to some official or other in the *Sadr* or *Tahsíl*.

Not long ago a man was appointed on a good salary to the charge of some valuable forests, whose chief qualification seems to have been that he had once been in charge of a grass farm.

Government spends large sums in maintaining a Forest School at Dehra Dún, and now students are beginning to go there at their own expense. It seems a wrong policy to appoint untrained men when trained ones are available; I would therefore suggest that District Officers and others should be instructed to apply to the Conservator for all men, above the *status* of guard or *chaprassi*, who may be required for arboricultural work. A list is kept up of all Dehra certificated men who are in want of employment; so that if the Conservator cannot spare one of the officers in the Department, he can almost always recommend a man who has obtained the School Certificate.

Again, in all the districts where Forest Officers are located, their advice may be taken with great advantage, and their co-operation invited, specially in supervising the actual work done, while in the Districts where no Forest Officer resides, the Conservator can frequently depute a Ranger for a short time to help the local officials.

I have the honour to be,

Sir,

Your most obedient servant,

C. F. ELLIOTT,
Conservator of Forests, Punjab.

PROGRESS REPORT

ON THE

ARBORICULTURE IN THE PUNJAB

FOR THE THREE YEARS 1896-97 TO 1898-99.

According to the classification given on page 92 of the "Manual of Arboriculture" the districts are grouped as follows :—

(i).—Arid.	(ii).—Very Dry.	(iii).—Dry.	(iv).—Forest.
1. Muzaffargarh.	1. Ferozpur.	1. Jhelum.	1. Gujrat.
2. Mooltan.	2. Pesháwar.	2. Gujranwála.	2. Gurdáspur
3. Dera Gházi Khan.	3. Kohát.	3. Gurgáon.	3. Umballa.
4. Dera Ismaíl Khan.	4. Rohtak.	4. Amritsar.	4. Siálkot.
5. Montgomery.	5. Lahore.	5. Delhi.	5. Hoshiárpur.
6. Jhang.	6. Karnál.	6. Jullundur.	6. Simla.
7. Bannu.		7. Ludhiána.	7. Hazára.
8. Sháhpur.		8. Ráwalpindi.	8. Kángra.
9. Hissár.			

A.—GENERAL REMARKS REGARDING THE SEASONS.

1. The rainfall of the triennial period under report is given in Statement No. I, which gives details of the summer and winter rains.

Arid Districts.

Bannu shows a rainfall above the average in all three years under report; all other arid districts received less than the average in the two years 1896-97 and 1898-99. In the year 1897-98 all show a rainfall above the average except Montgomery and Dera Gházi Khan, where the rainfall fell short of the average in all three years.

Very Dry Districts.

In the very dry districts the rainfall was below the average in all three years in the Ferozpur and Karnál districts. In 1896-97 the rainfall was below the average in all very dry districts. In 1897-98 the average was exceeded in all districts but the two above-mentioned and in 1898-99 it was not attained in any but Pesháwar.

Dry Districts.

In all dry districts except Jhelum the rainfall was below the average in all three years. In the Jhelum district the rainfall fell short of the average in 1896-97 and exceeded it in the following two years.

Forest or Fairly Moist Districts.

In the forest districts the rainfall was below the average in all three years in Gujrat, Siálkot, Simla and Kángra. In all the remaining districts it was below the average in 1896-97, above the average in 1897-98 with the exception of Hoshiárpur, and below the average in 1898-99 with the exception of Gurdáspur and Hoshiárpur.

This shows that generally speaking the period under report has been a bad one for arboriculture. In two out of the three years the rainfall was below the average in almost all districts.

In 1896-97 the rainfall was below the average in all districts in the Province with the exception of Bannu, in which the rainfall was slightly above the average.

In 1897-98 the rainfall was above the average in nearly all the arid and very dry districts; but below the average in most of the dry and fairly moist districts. About half the districts had a rainfall above the average and half below.

In 1898-99 the rainfall was below the average in all districts except the following five :—Bannu, Pesháwar, Jhelum, Gudáspur and Hoshiárpur.

B.—DISTRICT ARBORICULTURE BY GOVERNMENT AGENCY.

(a).—GENERAL.

The following abstract shows the progress made in avenues during the three years under report as well as the figures of the previous triennial period :—

1	2	3	4	5	6
YEAR.	Length of roads and canals suitable for avenues.	LENGTH OF ROADS AND CANALS.			
		Fully stocked at the beginning of the year.	Planted during the year or period.	Which failed during the year or period.	Fully stocked with plants or trees alive at the end of the year or period.
	Miles.	Miles.	Miles.	Miles.	Miles.
1893-94 to 1895-96 ...	12,787·32	6,928·51	1,064·74	732·45	7,260·80
1896-97	13,041·16	7,260·80	280·45	144·74	7,396·51
1897-98	13,103·05	7,396·51	234·93	151·85	7,479·59
1898-99	13,272·62	7,479·59	330·71	133·50	7,676·80
1896-97 to 1898-99 ...	13,272·62	7,260·80	846·09	430·09	7,676·80

From the above it will be seen that the length of avenues has increased by 416 miles, the increase of the previous triennial period being 332·29 miles. After excluding from the figures in columns 4 and 5 the entries made on account of corrections of previous returns and transfers, the actual length planted during the period under report amounts to 764·11 miles and the actual failures to 403·59 miles, or a net increase of 360·52 miles compared with 446·04 miles in the previous period. The chief additions to avenues successfully planted during the period were in the Pesháwar, Ludhiána, Jhang, Siálkot and Karnál districts.

The statement given below shows the progress made in groves :—

1	2	3	4	5
YEAR.	AREA OF GROVES			
	At the beginning of the year or period.	Planted or transferred from nurseries during the year or period.	Which failed during the year or period.	Stocked with trees or plants alive at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.
1893-94 to 1895-96	4,870·04	826·05	198·70	5,497·39
1896-97	5,497·39	78·71	109·79	5,466·31
1897-98	5,466·31	34·98	6·02	5,495·27
1898-99	5,495·27	64·44	427·54	5,132·17
1896-97 to 1898-99	5,497·39	178·13	543·35	5,132·17

The above shows a decrease in area of groves of 365·22 acres, whereas the returns of the previous period showed an increase of 627·35 acres. By excluding the areas due to correction of previous returns and transfers, the figures show a net increase in area of groves actually planted of 21·19 acres against an increase of 121·39 acres during the previous period. The chief additions to areas successfully planted were in the Amritsar, Jhang and Jullundur districts. In Shahpur 150 acres were transferred to the Forest Department and in Ludhiána large areas were given up for cultivation, being unsuited for groves.

The following statement shows the progress made in plantations :—

1	2	3	4	5	6
YEAR.	Area taken up for plantations at the beginning of the year or period.	AREA OF PLANTATIONS			
		Successfully stocked at the beginning of the year or period.	Sown or planted during the year or period.	Which failed during the year or period.	Stocked at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.	Acres.
1893-94 to 1895-96 ...	7,569·67	3,581·14	289·93	358·45	3,512·62
1896-97 ...	7,473·32	3,512·62	19·30	125·46	3,406·46
1897-98 ...	8,029·56	3,406·46	56·68	60·81	3,402·33
1898-99 ...	8,725·73	3,402·33	514·05	902·08	3,014·30
1896-97 to 1898-99 ...	8,725·73	3,512·62	590·03	1,088·35	3,014·30

The above figures show a decrease in area of plantations of 498·32 acres. By excluding areas due to corrections of previous returns and transfers there is a net increase of 218·79 acres whereas in the previous period there was a net decrease of 68·52 acres.

The areas of new plantations successfully established were in the Firozpur, Kangra and Jullundur districts. In Bannu there is a large decrease in area owing to correction of previous returns and in Gurgáon 70 acres were restored to villages.

The following statement shows the progress made in nursery work :—

1	2	3	4	5
YEAR.	AREA OF NURSERIES			
	At the beginning of the year or period.	Added during the year or period.	Given up or transferred to groves during the year or period.	Remaining at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.
1893-94 to 1895-96 ...	589·80	302·22	271·13	620·89
1896-97 ...	620·89	27·89	47·16	601·62
1897-98 ...	601·62	24·46	46·38	579·70
1898-99 ...	579·70	50·26	35·47	594·49
1896-97 to 1898-99 ...	620·89	102·61	129·01	594·49

The figures as they stand show a decrease in area under nurseries of 26·40 acres ; but after deducting areas due to corrections of previous returns and transfers there is a net increase of 9·40 acres whereas in the previous period there was a net increase of 31·09 acres. The chief additions to the area under nurseries occurred in the Pesháwar, Ludhiána and Gujrán-wala districts.

Details of progress made during the period in avenues, groves, plantations and nurseries are given in Statements II, to V, at the end of the report.

(b).—DETAIL OF WORK DONE.

I.—Avenues—(i).—Arid Districts.

1. *Muzaffargarh*.—The length of avenues added during the period was 7 mile making the total length of avenues 120·70 miles. More than 10,000 trees were planted in gaps, but it is said that many died owing to the “Soma” water in the Sanáwan Tahsíl, *i.e.*, water percolating from the canals.

2. *Mooltan*.—Increase of 5·59 miles of roads planted with a row of trees on either side. The total length of avenues being 233·93 miles. The failures in planting are said to be due to the Sidhnai and other canals being dry for a longer period than usual.

3. *Dera Gházi Khan*.—No avenue work was done during the present period and the length of roads suitable for avenues has fallen from 114 to 110 miles, owing to the land in various parts of the district being found unfit for this purpose.

4. *Dera Ismail Khan*.—2·50 miles of avenue were planted and 6·65 miles failed. The failure is said to be due to the over-flooding of the Indus in 1897-98, which damaged the roadside trees in the Bhakkar Tahsíl, and also to insufficient rainfall.

5. *Montgomery*.—No avenues were planted during the period under report. Nearly all the roads in the district are treeless, as water is too scarce for successful arboriculture.

6. *Jhang*.—Two miles of the Jhang and Lyallpur roads were planted with 336 trees, out of which 63 failed. On two different roads at the *sadr* about 1 mile was planted with Mango trees; but most of them died owing to severe frost. They were replaced by *shísham* trees which are flourishing. Roadside planting in the Lyallpur colony has made great progress.

7. *Bannu*.—The total length of avenues shows an increase of 7·23 miles during the period. 6,148 trees were planted, of which 75 per cent. were successful.

8. *Sháhpur*.—Owing to scanty rainfall the length of roads under avenues has fallen from 532 miles to 529 miles.

9. *Hissár*.—The total length of roads planted with avenues is 108·26 miles. There are 29 roads on which single rows of trees exist. Arboriculture in the Hissár district is very difficult owing to the deficient rainfall, and only a few localities can receive canal water.

(ii).—Very Dry Districts.

1. *Ferozpur*.—The chief species introduced was the *kíkar*, seed of which was sown partly on the banks of, and partly inside, the trenches, so that some seedlings might survive wherever conditions are favourable to either the one or the other position. A length of 5 miles of avenue was thus added during the period under review.

2. *Pesháwar*.—184 miles of roads were planted, of which 42 miles failed, which is said to be due to insufficient rainfall.

3. *Kohát*.—The length of avenues is 16·82 miles, out of which 12·91 miles are stocked with 10,131 trees against 9,012 trees at the end of the previous period. During the period 3,660 trees were planted, of which about 30 per cent. were successful. Considerable damage was done to roadside trees by transport animals on their way to the frontier.

4. *Rohatak*.—An increase of 4·25 miles in length of avenues. 4,640 trees were planted, of which very few succeeded. It is said that the *zamindárs* uproot the young plants whenever they get a chance, as the shade given by the roadside trees interferes with the growth of their crops.

5. *Lahore*.—The work chiefly consisted in planting up gaps in already established avenues, and little new avenue work was undertaken.

6. *Karnál*.—The increase in length of avenues is 31.43 miles, of which however 26.50 miles were received by transfer from the Umballa district. 4,741 trees were planted during the triennial period under report.

(iii).—*Dry Districts.*

Jhelum.—28.55 miles of roads were planted, of which 5.78 miles were reported as failures, the total length of roads now planted up being 353.67 miles. The number of trees planted was 9,208, of which 25 per cent. failed. The percentage of failures as compared with that of the previous triennial period is nearly three times as great, as might be expected with so deficient a rainfall.

Gujránwála.—13.53 miles of avenues were planted, of which 1.51 miles failed, the total length of avenues now being 177.01 miles. The species planted were chiefly *shisham* and *kíkar*. Plants about 4 feet in height are planted with balls of earth at 3 feet apart from each other and protected by fencing. The plants are watered from the Chenáb Canal every second day during the summer and every fifth day during the winter.

Gurgáon.—No work was done in planting avenues during the period under report, owing to scarcity of rainfall.

Amritsar.—62.49 miles of avenues were planted up, of which 57.43 miles failed, which is a very large percentage. The total length of avenues is now 228.69 miles, of which 177.28 miles are under the District Board, and 51.41 miles under the Municipality.

Delhi.—49.74 miles of avenues were planted, of which 39.54 miles failed, the total length of avenues now being 186.43 miles, of which 161.43 miles are under the District Board and 25 miles under the Municipality. No avenue work was done by the latter during the period under report.

The large failures are due to scanty rainfall, and in the Delhi Tahsíl to destruction of plants by locusts in 1897-98.

Jullundur.—No change was made in the length of avenues. Work consisted in filling up gaps in existing avenues. In 1896-97 all available money was reserved for famine relief works in case of their being necessary, and what money might now be available for planting work is to be utilised for combating the bubonic plague; very little money thus remains available for arboriculture work. 15,404 plants were put out in gaps, of which 16 per cent. failed.

Ludhiana.—Statement No. V shows an increase of 64.81 miles in the length of avenues; of this however, 55.38 miles are due to correction of previous returns. The actual length of avenues planted was 32.93 miles, of which 10 miles failed. The length of avenues is now 199.81 miles. 11,789 plants were planted in single rows along roadsides, and 12,328 to fill up gaps in existing avenues.

Ráwalpindi.—The length of avenues shows a decrease of 1.57 miles. Half-a-mile of avenues was planted by the District Board and a quarter of a mile by the Municipality, but the work proved a failure. The total length of avenues is now 334.22 miles, of which 10.46 miles are under the Municipality.

(iv).—*Forest, or Fairly moist Districts.*

Gujrát.—20.52 miles of avenues were planted and 32.57 miles failed, the total length of avenues thus being reduced to 414.48 miles under the District Board and 7.72 miles under the Municipality. Although no progress was made in the actual length of new avenues planted, yet much work was done in filling up gaps in avenues already existing.

Gurdáspur.—60.47 miles were planted, and 36.90 miles failed, the length of avenues now existing being 489.57 miles.

Umballa.—29.95 miles were planted, 26.50 miles were transferred to the Karnál district, and 45.59 miles failed. The length of avenues now existing being reduced to 154.14 miles. The failures are due to scanty rainfall in 1896-1898.

Siálkot.—34·38 miles of avenues were planted up by the District Board, of which 1·25 miles failed, and three quarters of a mile were planted by the Municipality with no failures. The length of avenues now existing under the District Board is 574·87 miles and under the Municipality 5·75 miles.

Hoshiárpur.—23 miles of avenues were planted, the whole of which was successful. The length of avenues now existing is 463 miles. 40,465 young trees were planted, consisting chiefly of *pápal*, *shísham*, *kíkar*, and mango.

Simla.—2·50 miles were planted at Kasauli with young pine trees and no failures are reported, the length of existing avenues now being 5·16 miles. Owing to the hilly nature of the district it is said to be generally impossible to plant considerable lines of trees.

Hazára.—2·75 miles were planted and 2·25 miles failed. The length of existing avenues is now 18·80 miles under the District Board, and 4·50 miles under the Municipality.

Kángra.—28·05 miles were planted by the District Board and 24·00 miles failed, the length of existing avenues now being 421 miles. No avenue work was done by the Dharmśála Municipality, the length of avenues being still 6·35 miles.

II.—GROVES AND PLANTATIONS,

Arid Districts.

In *Muzaffargarh* district 8 acres were added to the area of groves whilst 42 acres failed, leaving an area of 242·85 acres now existing. The above 8 acres consist of a new garden laid out near the Church at Muzaffargarh, which has been planted up with fruit trees.

In *Mooltan* 15·15 acres of groves were sold, the area under groves now being 6·23 acres.

In *Dera Gházi Khan* the area of plantations remains the same. The Shaúf Shah Horse Fair ground has not turned out a success, forming a picturesque grove as was expected, owing to the trees having died in large numbers, which is said to be due to the rise in the level of the subsoil water.

In *Jhang* there is no alteration in the area of plantations. The *Sahjawál* plantation is doing well and yields timber, grass and *munj* as sources of revenue. The area of groves has increased by 22·28 acres, the total area now being 48·11 acres.

In *Bannu* the alterations in areas of groves and plantations are due to corrections of previous returns.

In *Shahpur* there is a decrease in the area of groves of 150·44 acres, chiefly due to the transfer of a large area to the Forest Department.

In *Hissár* the only plantation is the Hánsi Bir, and it is proposed to make this over to the Civil Veterinary Department as part of the Hissár farm. The portion under trees is said to be unsuitable for tree-growing owing to the presence of swarms of white ants, which are very destructive to the trees.

Very Dry Districts.

The Khernwála plantation in the Ferozpur district is still doing well. Up to September 1898, 213 acres were planted up. In 1898, it was transferred to the District Board for ten years with effect from 1st September 1897, on the terms that the land shall remain the property of Government and be kept under tree growth. In 1898-99, 20 acres more were stocked with *kíkar*, of which 3 acres failed.

In *Pesháwar* 1 acre was transferred to groves from nurseries. There is no special plantation in the district, as sufficient timber is said to be received by floating down the rivers Cabul, Swát, Bára and Indus.

In *Karnál* two more groves were added comprising an area of 66 acres, the total area under groves now being 318·03 acres, containing 3,483 trees.

Dry Districts.

In *Gujránwála* there are no plantations. There is one grove of 1·51 acres in the Háfizabad Tahsil.

In *Gurgáon* the area under groves was reduced by 3·37 acres by the sale of trees from this area. The area under plantations was reduced by 70 acres, the land being restored to villages, as it was found to be unprofitable for tree-growing.

In *Amritsar* the area of groves was increased by the transfer of 33·02 acres from nurseries and 10·08 acres were added owing to omission from previous returns, of areas of encamping grounds, *seráis*, &c. Under the Municipality 1·75 acres are shown as groves, which includes the compounds of dispensaries, schools, &c.

In the *Delhi* district trees were planted on 2 acres of the Tilauri plantation, and 3·3 acres of the *band* embankment were sown with *kíkar* seed; but the operations were not very successful owing to scanty rainfall. Seventeen acres of plantation at Mahrauli were given up to villagers. A grove of ·07 acres was planted in the Sonapat school grounds. The groves in the district are in a good condition, and that consisting of prickly pear on the ridge in the Municipality 1·5 acres in area is flourishing.

The area of plantations in the Jullundar district has been increased by 28·18 acres, being the area which was washed away by the Sutlej River in 1895-96 and 1896-97, but subsequently recovered owing to the river having changed its course.

In *Ludhiána* district there are 187·7 acres under groves. The decrease is chiefly due to trees having been sold and areas leased for cultivation. The experiment of establishing a timber depôt at head-quarters proved a failure.

In *Ráwalpindi* district there are 360·15 acres stocked as groves by the District Board. Five acres under the Municipality were abandoned owing to the removal of trees from the *Ráwalpindi* garden for improvements and by the clearing of trees in the Tali-Shahán garden in order to convert it into a site for Horse Fairs.

Forest or Fairly Moist Districts.

In *Gujrát* district the area under groves has increased from 176·82 acres to 187·09 acres and in Gurdáspur from 8·15 acres to 15·89 acres.

In *Umballa* trees were sold from an area of 2·15 acres. The total area under groves being now 18·25 acres.

In the *Simla* district it is reported that the hill near the Sappers and Miners' spring is covered with deodar plantations which are doing well, and many other places in the cantonment were improved by planting cypress trees. The area under plantations is 57·5 acres.

In the *Kángra* district the area of ·6 acres added to the tahsíl garden at Pálapur in 1895-96 has now become a regular garden, and the fruit trees planted in it are doing well.

III.—NURSERIES.

From the nurseries in the Dera Gházi Khan district about 600 plants consisting chiefly of fruit trees were distributed; but it is said that landowners who previously had eagerly applied for plants for extending their gardens on the *sailába* lands have become very much disheartened owing to the river having washed away valuable gardens of fruit trees.

In the *Dera Ismail Khan* district there are 7 nurseries comprising 12·9 acres. These nurseries supply young plants for transplanting along roadsides.

In the *Jhang* district the area under nurseries is 11·37 acres. The plants in the nurseries consist chiefly of *kíkar* and *shísham*, of which about 1,000 plants were transplanted along roadsides.

In the *Bannu* district the nursery at Isā Khel has been temporarily closed, as all the plants have been transplanted from it. The nursery at Silwán was washed away by the river Indus. The area remaining under nurseries is 52 acres. In Hissár there are 7 nurseries containing *shísham*, *ním*, and *kíkar*, and no alterations occurred in their area.

Very Dry Districts.

In *Pesháwar* about 5 acres were taken up for nurseries.

In *Kohát* two small nurseries were given up, and two new areas commenced. The supply of plants from nurseries was not sufficient to meet requirements, and plants had to be obtained from private gardens. Only *shísham* plants were reared in the nurseries.

In *Rohtak* there are two nurseries, containing *shísham*, *jáman*, *pípal* and *ním* plants. The last named grows luxuriantly in this district.

In *Karnál* there are 10.38 acres under nurseries, which are all irrigated by wells. They contained 10,714 young plants at the end of the period under report, and supplied during this period 4,741 plants for transplanting on roadsides.

Dry Districts.

In the *Gujránwála* district there are 9 nurseries, comprising 170.88 acres. The expenditure incurred on their maintenance was Rs. 1,704, while Rs. 159 was received from the sale of plants. The nurseries are all irrigated free of cost from the Chenáb Canal. The establishment consists of one *máli* and one *coolie* for each nursery. These were formerly paid Rs. 9 and Rs. 7 per mensem, respectively; but now instead of being paid in cash, each man is allowed to cultivate half-a-square of spare land for his own private use. The nurseries chiefly contained *shísham* and *kíkar* trees, and the colonists are allowed any number of plants free of cost.

In *Amritsar* 33.02 acres were transferred to groves. At the end of the period the nurseries existing contained 5,000 *shísham*, 200 mango, 600 orange, 100 peach, 150 apple and 350 pomegranate plants.

In *Delhi* there are 5 nurseries comprising .68 acres. These yielded ,036 young trees for planting along roadsides and 325 plants were sold.

In *Jullundur* there are 10 nurseries comprising 7.48 acres, which yielded 15,404 young trees for transplanting on roadsides and 753 plants were sold to purchasers other than *zamíndárs*.

In *Ludhiána* there are 13 nurseries stocked with mango, *jáman* and *shísham* plants, the area being 4.03 acres. Rs. 25 were realised from sale of plants and about 250 young trees were given *gratis* to *zamíndárs*.

Forest or Fairly Moist Districts.

In *Gurdáspur* there are 11 nurseries comprising an area of 3.95 acres. The expenditure on nurseries was Rs. 566 and the revenue realised from the sale of fruit trees from them was Rs. 265.

In *Hoshiárpur* the total area of nurseries is 9.43 acres. Thirty-four new nurseries were established chiefly for producing fodder trees, *pípal* and *kíkar*. The existing nurseries are still insufficient for the requirements of the district.

The area under nurseries in the *Simla* district is 8 acres, and is under the care of the Superintendent of the Annandale gardens. The nurseries yield chiefly fruit trees which are grown for distribution to cultivators and for sale. Fruit trees were distributed, of which the greater number were given *gratis* to *zamíndárs*, who take an interest in fruit culture. Some were also sold at 2 annas each to house-owners in Simla.

In *Hazára* district there are 9 nurseries comprising 15.39 acres which are well looked after, and provide a large number of young trees for roadside planting. About 500 plants were distributed to *zamíndárs* for private plantations, and 200 plants were supplied free of cost for the military *rakh* at Abbottabad.

IV.—GOVERNMENT GARDENS.

Arid Districts.

In *Muzaffargarh* a new garden, 8 acres in area was made near the church and has been planted up with fruit trees.

In *Dera Ismail Khan* the fruit gardens at Dera, Leiah and Bhakkar are doing well; but they suffered somewhat for want of rain in 1898-99. A number of orange, mango, and pomegranate trees were added to the gardens.

In the garden in *Jhang* the grape-vines have not been very successful, and a large number of the mango trees were destroyed by frost. 110 fruit trees of different kinds were obtained from the Lahore Agri-Horticultural gardens and were planted in a garden near the *kutchery* compound. For the District Board garden at Shorkot 286 fruit trees were supplied. A public garden has been established at Lyallpur and a small ornamental garden in the *kutchery* compound.

In *Sháhpur* 586 fruit trees were purchased from the Agri-Horticultural gardens, Lahore, and were planted in the Sadr gardens, and a new garden was made near the Local Fund Office.

Very Dry Districts.

In *Kohát* there is one ornamental garden in charge of the Municipal Board. It contains fruit trees such as guavas, loquáts, peaches, mangoes, *jáman*, &c. The area previously used for the cultivation of vegetables has been turned into a recreation ground, which has decreased the revenue from the garden. A large number of fruit trees of many kinds were planted in the Shahdrah and Shálámár gardens in the Lahore district, and the results have on the whole been successful.

In *Karnál* the experiments made with the date-palm have not been satisfactory, as out of all the sowings which have been made only 56 plants are in existence.

Dry Districts.

In the *Gujránwála* district there are six gardens, the largest being that in Gujránwála station which is 20 acres in area. This garden contains many kinds of fruit trees; but the Malta orange is the kind mostly cultivated and forms the chief source of revenue. A great variety of flower and vegetable seeds was purchased from Mussoorie and sown in the gardens in the district. The plants and fruit trees suffered considerably from frost during the last cold weather.

In *Amritsar* the Rámabagh garden is kept up for the general public as an ornamental garden, and at the same time it brings in a revenue which is steadily increasing, and it is believed confidently that in time it will be self-supporting. The sale of plants, fruits and vegetables alone yielded an income of Rs. 8,086 during the three years under report. At the end of the period there were 2,350 young fruit trees in the garden consisting of orange, peach, apricot, plums and loquáts. There were also 500 grafted mango plants and about 5 acres sown with vegetables. The Nicholl and Aitchison parks are kept up as pleasure resorts for the public and are in a flourishing condition, and at the same time yield a fair income from the sale of grass and fruits.

There are three ornamental gardens in the *Delhi* Municipality. These have suffered considerably for want of water. They are watered by canal water, which can only be obtained for ten days during each month; Government has been addressed on the subject in the hopes of improving matters. In *Jullundur* there is one ornamental garden the "Empress Garden." It is partly laid out with grass and partly with fruit trees, no area being under vegetables.

In *Ludhiána* district there is a fruit garden in the Jagráon Tahsil which is in a flourishing condition and yields an income of about Rs. 400 per annum, the expenditure on its maintenance only being Rs. 240. This garden has thus become self-supporting and the income from it is expected to increase steadily.

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In the *Rāwalpindi* district there are six public gardens, chiefly maintained for the propagation of fruit trees and flowers.

Forest or Fairly Moist Districts.

The mango trees planted in the District Board garden in *Gujrāt* have died owing to the soil being unsuitable; but the orange trees are flourishing.

In the *Gurdāspur* district 1,019 fruit trees were obtained from the Annandale gardens, Simla, and 121 from the Agri-Horticultural gardens, Lahore, and were planted in the district gardens and distributed to owners of private gardens and 411 were planted at Bakhloh.

In *Umballa* the only garden from which any appreciable income is derived is the station garden of Umballa, which yields over Rs. 300 per annum, but this is considerably exceeded by the expenditure. The garden at Morni was started for making experiments in tea growing, which failed.

In *Siālkot* district cuttings of the American vine obtained from the Simla gardens were put in some years ago in the District Board gardens. These have developed into strong healthy plants and have yielded fruit of fair quality, but of rather small size. A few cuttings of vines from Quetta have also been planted and are doing well. The experiments with the Egyptian date-palm have been very successful, and the trees have borne excellent fruit. A small quantity of seed of *Ingaduleis* has been sown and has germinated well.

In the *Hoshiārpur* district experiments have been carried out with the *marram* grass. The roots of this grass are received from Australia in a dry condition. The results of the experiments show that this grass thrives well if looked after and well watered. No further experiments were made with *Eucalyptus*.

Seed of *Acacia melanoxylon* obtained from Nainital was sown in the station garden and in *Hoshiārpur* tahsíl garden, 550 plants were obtained; from reports received from the Tahsildárs it appears that the zamindárs are not willing to take the plants.

In *Hazāra* district the public gardens at Abbottabad and the nazúl gardens at Haripur are doing well.

(c).—CATTLE-TRESPASS AND LOPPING.

There is little of interest to report under this sub-head.

In *Kohāt* it is reported that the progress in arboricultural operations is much impeded by large herds of goats and the cattle of nomad Waziris. In 1897-98 considerable damage was done to roadside trees by the transport animals on their way to the frontier during the Tírah Expedition.

In *Karnál* district trees are protected against damage from cattle by thorn fences and mud walls erected round the trees.

In the *Delhi* district four persons were prosecuted for cutting trees in the Balabgarh tahsíl and were fined Rs. 14.

In the *Jullundur* district the roadside trees are protected by cactus hedges and *gumlás* and gangs of coolies are employed on tending and protecting them. During the last three years 1,054 cattle were impounded and 20 cases were prosecuted in Courts.

In *Guiárt* district roadside trees are protected in many portions of the district by fences made of branches of *kíkar*, *ber*, *phulái*, &c. Much damage is said to be done by camels, which whenever caught are sent to the pound.

In *Hoshiārpur* district much damage is done by goats and camels to roadside trees. They are, however, protected as much as possible by the erection of fences of thorny branches, *gumlás* and cactus hedges.

(d).—FODDER TREES.

There is nothing of special interest to report under this head. In very few districts have any measures been taken to grow trees for the purpose of yielding fodder. The trees which have been propagated for this purpose consist of *kíkar*, *pípal* and *sisís*.

(e).—FINANCIAL.

The following statement shows the financial results of the period under report as compared with the four preceding triennial periods :—

1	2	3	4	5
YEAR.	Income.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
1884-85 to 1886-87	1,92,874	4,36,519	...	2,43,645
1887-88 to 1889-90	3,64,145	7,05,868	...	3,41,723
1890-91 to 1892-93	5,25,320	8,29,574	...	3,04,254
1893-94 to 1895-96	5,49,865	8,05,891	...	2,56,026
1896-97	1,96,365	2,77,263	...	80,898
1897-98	1,85,416	2,65,825	...	80,409
1898-99	1,64,362	2,57,099	...	92,737
1896-97 to 1898-99	5,46,143	8,00,187	...	2,54,044

There is nothing particular to note with regard to these figures. The revenue and expenditure during the period under report shows little difference from that of the previous period. The highest revenue was derived from the Siálkot, Simla and Ludhiána districts, and Amritsar, Lahore and Delhi Municipalities. The highest expenditure was incurred in the Lahore and Amritsar Municipalities and in the Siálkot, Mooltan and Firozpur districts. Details of revenue and expenditure are given in Statements VI and VII at the end of the report.

C.—DEVELOPMENT OF ARBORICULTURE BY PRIVATE PERSONS.

On the whole not much interest is taken by private persons in arboriculture. The chief interest is taken in the growing of fruit trees for profit. In most districts a large number of young fruit trees have been distributed to such individuals who cared to have them and these free grants have given a considerable impetus to fruit culture.

Arid Districts.

In *Dera Gházi Khan* a large number of fruit trees was distributed to *zamindárs*; but owing to some fruit gardens having been washed away by floods the people have become somewhat discouraged.

Very Dry Districts.

In *Kohát* district it is reported that whenever there is sufficient water and the soil is good, the people are anxious to cultivate fruit trees; so there is no great necessity to distribute them gratis. The private gardens at *Kohát* and *Hangu* are in a flourishing condition. The Arabian date-palm has not proved very successful; in a few places they are doing well; thus in one garden 13 trees have borne fruit.

Dry Districts.

In the *Amritsar* district five gardens planted with fruit trees by private persons are in good condition.

Forest or Fairly Moist Districts.

In the *Gujrát* district plants were distributed at nominal prices, *zamindárs* being charged one anna per tree and other persons two annas. In future it is intended to distribute the young trees free of charge in hopes of increasing interest in arboriculture.

In *Siálkot* district considerable interest is taken in arboriculture by the people and small private orchards are maintained in various parts of the district as sources of income. In every village may be seen one or more groves of timber trees. There has been much improvement in the cultivation of European vegetables, the "*Arains*" being first class market gardeners.

In the *Hoshiárpur* district fruit trees were obtained from Simla and were distributed amongst such *zamíndárs* as cared to have them.

In the *Hazára* district it is reported that the people are very fond of planting up fruit gardens, especially in the Haripur Tahsil. A large number of fruit trees were obtained from the Simla gardens, and distributed to land-owners.

In the *Kángra* district numbers of fruit trees were distributed to land-owners and also to professional fruit-growers at Palámpur, Kángra, and Núrpur. The cherry is not a success, and apple is only fairly successful. The fruit trees which thrive the best are peaches and plums, and the demand for young trees of these kinds exceeds the number available. Pears succeed better in the Kulu valley. Chestnuts have been an entire failure except in Kulu.

D.—CANAL ARBORICULTURE.

The following statement shows the progress made in planting up canal avenues during the three years under report as compared with that of the previous three years:—

1	2	3	4	5	6
YEAR.	Length of roads and canals suitable for avenues.	LENGTH OF ROADS AND CANALS			
		Fully stocked with trees at the beginning of the year or period.	Planted during the year or period.	Which failed during the year or period.	Fully stocked with trees and plants at the end of the year or period.
	Miles.	Miles.	Miles.	Miles.	Miles.
1893-94 to 1895-96 ...	5,047·22	2,604·25	745·02	353·37	2,995·90
1896-97	5,250·17	2,995·90	522·44	464·25	3,054·09
1897-98	5,972·50	3,054·09	314·85	84·69	3,284·25
1898-99	6,455·19	3,284·25	749·66	453·28	3,580·63
1896-97 to 1898-99 ...	6,455·19	2,995·90	1,586·95	1,002·22	3,580·63

This statement shows that the total length of avenues has increased by 584·73 miles. After deducting the entries due to corrections of previous returns, as well as those due to transfers to other heads, the actual increase of avenues planted amounts to 609·87 miles. The length of avenues planted was 1,136·27 miles against 509·98 miles during the previous triennial period and the actual length which failed was 526·4 miles.

The progress in plantations is shown in the following statement :—

1	2	3	4	5	6
YEAR.	Area taken up for plantation at the beginning of the year or period.	AREA OF PLANTATIONS			
		Successfully stocked at the beginning of the year or period.	Sown or planted during the year or period.	Which failed during the year or period.	Stocked at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.	Acres.
1893-94 to 1895-96	24,784.11	16,484.39	1,484.98	575.41	17,393.96
1896-97	24,564.62	17,393.96	770.34	494.40	17,669.90
1897-98	24,835.04	17,669.90	693.39	266.01	18,097.28
1898-99	25,811.61	18,097.28	1,278.78	631.15	18,744.91
1896-97 to 1898-99	25,811.61	17,393.96	2,742.51	1,391.56	18,744.91

This shows that the area under plantations has increased by 1,350.95 acres during the period under report. After deducting areas due to corrections and transfers, the actual area successfully planted during the period is 2,479.51 acres and the area which failed 1,021.93 acres, giving a net increase in the area under plantations during the period under report of 1,457.58 acres against 787.50 acres during the previous three years.

The progress in nurseries is given in the following statement :—

1	2	3	4	5
YEAR.	AREA OF NURSERIES			
	At the beginning of the year or period.	Added during the year or period.	Given up or transferred to plantations during the year or period.	Remaining at the end of the year or period.
	Acres.	Acres.	Acres.	Acres.
1893-94 to 1895-96	66.58	56.36	57.49	65.45
1896-97	65.45	20.36	21.25	64.56
1897-98	64.56	33.38	35.52	62.42
1898-99	62.42	18.46	28.84	52.04
1896-97 to 1898-99	65.45	72.20	85.61	52.04

This shows the area under nurseries to be 52.04 acres, which is a decrease of 13.41 acres during the period under report. By deducting figures due to corrections of previous returns the area actually under nurseries has increased by 3.18 acres.

The following statement shows the financial results of canal arboriculture:—

1	2	3	4	5
YEAR.	Income.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
1890-91 to 1892-93	3,15,367	2,54,508	60,859	...
1893-94 to 1895-96	2,59,251	2,37,899	21,352	...
1896-97	99,821	90,028	9,793	...
1897-98	84,480	1,00,155	...	15,675
1898-99	84,502	1,29,869	...	45,367
1896-97 to 1898-99	2,68,803	3,20,052	...	51,249

This shows an increase of Rs. 9,552 in the revenue, an increase of Rs. 82,153 in the expenditure, and instead of a surplus, a deficit of Rs. 51,249 as compared with the results of the previous triennial period. The figures of the three years under report show that the revenue has steadily decreased and the expenditure increased. The highest revenue was received by the Sirhind-Ludhiána Division, Bári Doáb, 2nd Division, and Mooltan Canal Divisions. The highest expenditure was incurred in the Chenáb, 4th Division, Sirhind-Firozpur Division, and Sirhind-Patiála Division.

E.—ARBORICULTURE ON PROVINCIAL ROADS.

The following statement shows the work done on Provincial Roads:—

1	2	3	4	5	6
YEAR.	Length of roads suitable for avenues.	LENGTH OF ROADS			
		Fully stocked with trees at the beginning of the year or period.	Planted during the year or period.	Which failed during the year or period.	Fully stocked with trees or plants alive at the end of the year or period.
	Miles.	Miles.	Miles.	Miles.	Miles.
1893-94 to 1895-96 ...	1,893·36	890·60	330·81	192·38	1,029·03
1896-97	1,613·48	1,029·03	184·20	166·01	1,047·22
1897-98	1,753·07	1,047·22	184·92	162·26	1,069·88
1898-99	1,744·54	1,069·88	472·89	454·54	1,088·23
1896-97 to 1898-99 ...	1,744·54	1,029·03	842·01	782·81	1,088·23

The total length of roads under avenues is 1,088·23 miles which is an increase of 59·20 miles during the period under report. After deducting the figures due to corrections of areas the actual length of roads planted up during the period was 391·42 miles and the length which failed was 355·39 miles, or a net increase of 36·03 miles planted up compared with 82·56 during the previous period.

The statements at the end of the report show an increase of 3·08 acres only under groves, of 1·75 acres under plantations, and a decrease of 2·76 acres under nurseries.

The financial results are shown in the following statement :—

1	2	3	4	5
YEAR.	Revenue.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
Total 1890-91 to 1892-93 ...	81,137	1,38,399	...	57,262
Total 1893-94 to 1895-96 ...	1,01,803	1,15,109	...	13,306
1896-97	25,159	33,928	...	8,769
1897-98	23,515	32,653	...	9,138
1898-99	31,953	31,385	568	...
Total 1896-97 to 1898-99 ...	80,627	97,966	...	17,339

Giving a deficit of Rs. 17,339 during the period under report, whereas during the previous period there was a deficit of Rs. 13,306. The highest revenue was derived from the Umbálla, Lahore, Ludhiána and Gujránwála Provincial Divisions, and the highest expenditure was incurred in the Simla, Lahore and Dera Gházi Khan Divisions.

I have the honour to be,

Sir,

Your most obedient servant,

C. F. ELLIOTT,

Conservator of Forests, Punjab.

DISTRICT ARBORICULTURE.

I.—ARID DISTRICTS.

MUZAFFARGARH DISTRICT.

Rainfall.—The rainfall during the three years under report was smaller than that in the preceding three years. This is an arid district and owing to abundant canal irrigation, does not depend much on rain water.

Nurseries.—No separate nurseries, over a large area, were laid out during the three years under report, but some private landowners along the Alipur road were asked to give temporarily small pieces of land, measuring about a pole each near their wells, where *shisham* and *kikar* trees were sown and afterwards planted in place of those which died on that road.

Plantations.—No plantations in this district.

Groves.—The area newly planted with groves during the three years under report was 8 acres, while that of the failures was 42 acres. A new garden was laid out near the Church at Muzaffargarh over an area of 8 acres and some fruit trees have been planted there. The failures were all *shisham* trees.

Avenues.—During the three years under report, the length of revenues was increased by one mile and the failures were 3 of a mile. Owing to "Soma" water, the trees planted die very often; it is therefore very difficult in this district to keep up the trees once planted, hence more roads were not taken in hand. More than 10,000 trees were thus planted in gaps. The failures were only on account of the "Soma" water in the Sanawan tahsil.

Income.—The total income from arboriculture during the three years under report was Rs. 8,961-10-11 as compared with Rs. 7,907 of the preceding three years. The increase of about a thousand rupees was chiefly due to larger sales of roadside trees falling from the effects of the "Soma" water.

Expenditure.—The total expenditure on arboriculture during the three years under report was Rs. 16,005 as compared with Rs. 21,223 of the preceding three years. The decrease of about Rs. 5,200 was due to the Taleri Gardens having been leased out and the establishment thereof discharged.

Cultivation of fruit trees.—As remarked above some fruit trees were planted in the newly laid out garden near the Church at Muzaffargarh. Fruit trees were not distributed among the villagers but some well-to-do zamíndárs have planted fruit trees on their lands.

MOOLTAN DISTRICT.

Rainfall.—The following comparative table shows that the rainfall of the period under report in Tahsil Mooltan was remarkably deficient :—

	Tahsil.	Average for three years ending 1895-96.	Average for three years ending 1898-99.
Mooltan	...	10'03	5'62
Shujabad	...	5'99	7'11
Lodhrán	...	4'35	7'30
Mailsi	...	5'94	8'37
Kabírwála	...	7'15	10'04

Plantations.—There are no plantations under the management of the District Board or Municipal Committees in the district, the statement is therefore blank.

Groves.—There were 6 groves measuring 211·21 acres in the district, out of which a grove in area 14·35 acres situated in the vicinity of Mooltan was sold to one Barkhurdár, a lessee of the land for Rs. 85, *vide* Punjab Government No. 951, dated 10th May 1898, to Commissioner. The remaining 5 groves as detailed below have been shown in the return :—

	A.	R.	P.
(1) Near Basti Chamrang in the suburbs of Mooltan City	0	3	9
(2) Near General Van Cortlandt's Bungalow, close to Hazúri Bagh	2	3	8
(3) Basti Maluk	0	0	19
(4) Aliwála	3	1	26
(5) Makhdúm Rashíd	0	0	4
Total	7	0	26

Of this the trees existing on 3 roods 30 poles of land attached to Groves Nos. 1 and 2 were sold by the Municipal Committee for Rs. 14, hence the existing area under groves in the district is 6 acres 36 poles.

Avenues.—The statement shows that 39·69 miles of road in length on two lines of 19·84 miles on each side of the road were planted during the three years as follows :—

On new lines of road 23·63 miles.

On old lines of road to fill up the gaps, 16·06 miles.

Of these 23·51 or 14·25 miles failed for the following reasons :—

- (1). Dryness of Sidhnai and other canals for a longer period than before.
- (2). The rainfall of the period under report was below the average.

Income from Arboriculture.—The income derived from this head during the period under report amounted to Rs. 13,553 against Rs. 9,678 in the previous three years, the increase being due to the following causes :—

- (1). Trees including land on certain roads in Tahsil Shujabad were sold by public auction during 1896-97 as the roads were not used by the people and their maintenance therefore appeared unnecessary.
- (2). Sale-proceeds of trees in the nursery at Kúkar Hatta were larger than that of the last triennial period.
- (3). Contribution recovered during 1898-99 from factory owners on Suraj Kund road for watering the road and plants are now shown in the statement.

Expenditure on Arboriculture.—The expenditure incurred under this head during the period under report was Rs. 1,806 less than in the previous three years. The decrease was chiefly due to the establishment of gardens having been curtailed.

DERA GHAZI KHAN DISTRICT.

Rainfall.—As noticed in the previous years' reports, the rainfall in this district shows singular variation every year, the average of the past three years being about 4·68, and this fact is in itself unfavourable to the development of arboriculture of the district, the country, generally speaking, being an arid tract with a remarkably dry atmosphere and with a very hot season,

Nurseries.—The reduction of two nurseries inadvertently made in the year 1895-96, their area being transferred to groves, was made up in the following year as promised in the previous triennial report but no other improvements were found practicable owing to land in some parts of the district losing its usual suitability for the growth of young trees.

Below is noted the number and description of young tees distributed. As observed in the previous report the landowners who had in the past been eagerly applying for young trees with a view to extend their old gardens and to establish new ones along *sailab* lands to the west of the river in the vicinity of the town are now quite disheartened having already lost valuable gardens of fruit trees washed away by the river and have almost given up the idea of further developments.

Trees distributed.

<i>Names of trees.</i>								<i>Number distributed.</i>
Mangoes	...	...	...	...	...	...	...	42
Oranges	...	...	...	...	...	...	...	54
Jasamine	...	...	...	...	...	...	...	22
'Nim'	...	...	...	...	...	...	...	1
Figs	...	...	...	...	...	...	...	38
Malta Oranges	...	...	...	...	...	...	...	7
Vine	...	...	...	...	...	...	...	14
'Mithri'	...	...	...	...	...	...	...	60
'Rose'	...	...	...	...	...	...	...	8
'Sohánjaná'	...	...	...	...	...	...	...	8
'Kachnál'	...	...	...	...	...	...	...	6
'Shisham'	...	...	...	...	...	...	...	8
Mulberry	...	...	...	...	...	...	...	8
Pumblo	...	...	...	...	...	...	...	1
Lemon	...	...	...	...	...	...	...	4
Plantain	...	...	...	...	...	...	...	6
'Pipal'	...	...	...	...	...	...	...	4
'Kama'	...	...	...	...	...	...	...	8
Pomegranates	...	...	...	...	...	...	...	300
								599

Plantations.—No change can be reported in the area under plantations which is 1,677 acres.

Groves.—The Sharíf Shah Horse Fair ground has, it is to be regretted, lost its prospects of forming a picturesque grove as was hoped in the last triennial report, the rise in the level of subsoil water having had most unfavourable effects on the trees which died away in large number.

Avenues.—The mileage of roads suited for the purpose of avenue planting has fallen off from 114 to 110. The land in certain parts of the district having lost its utility for avenue planting, no development was found practicable during the three years under report.

Income.—The average annual income for the past three years has risen from Rs. 856 to Rs. 1,664, the largest increase having resulted in the year 1897-98 under the head "Ornamental Gardens" through better management, as hoped in the previous report.

Expenditure.—The average annual expenditure for the past three years has been only Rs. 4,047 as compared with Rs. 6,659 reported previously, the largest falling-off being in the year 1898-99 owing to curtailment of establishment and reduction in the remunerations paid to them, the establishment in some parts of the district having been considered over and above the requirements and many of them being overpaid considering the work they had to do.

DERA ISMAIL KHAN DISTRICT.

Rainfall.—The rainfall during the three years under report was as follows :—

1896-97	...	...	...	...	...	...	...	4.04
1897-98	...	...	...	...	...	...	...	12.58
1898-99	...	...	...	...	...	...	...	3.47

The average rainfall for each year, during the three years under report was considerably less than in each of the preceding three years (6.696 against 10.62). This district is well-known for its scanty rainfall which naturally affects the arboriculture considerably. The year 1898-99 was a bad one for arboriculture owing to a very scanty rainfall.

Water in wells remained at a reasonable level. Flooding from river Indus, which usually brings a vast tract in Bhakkar and Leiah tahsils under water during hot weather, was low in 1896 and 1898, but in 1897 there were high floods and the roadside trees were damaged to a great extent.

Nurseries.—There are now 7 nurseries in the district, 1 at the Head-quarters, 2 in Dera tahsil and one in each of the other tahsils of the district. At the close of the year 1895-96 there was a total of 117,812 acres of nurseries to which 895 acres were added

in 1897-98 and 2,875 in 1898-99, making a total of 12,9,637 acres. These nurseries supply young trees for plantation of roadside. Of the above area 75 acres or 1,620 plants were transplanted on the different roads and 1 acre died for want of rain and water in 1898-99.

Plantations.—There are no plantations in this district.

Groves.—The area of groves existing in this district at the end of the triennial period under report was 12,60 acres as in the last report. No fresh areas were planted or transferred from nurseries during the three years under report. The trees planted are mostly of *kághal* (*farásh*), a small number of *shísham* and *siris*.

Avenues.—There were 49.75 miles under avenues at the close of the year 1895-96. It will be seen from the returns that 2,495 miles of avenues were planted and 6,645 miles failed during the triennial period under report. The failure is mostly due to the over-flooding of Indus in 1897-98, which damaged the roadside trees in the Nasheb tract of the Bhakkar tahsil and partly to scanty rainfall.

The work of planting done during the three years under report chiefly consisted of re-placing dead trees with fresh ones.

A large proportion of the roads in this district are treeless. The reason for this is the scarcity of water along these roads.

Trees, Municipal.—The double row of trees on the roads at Dera Ismail Khan, Bhakkar, Leiah and Karor are in good condition. These trees continue to be maintained by the Municipal Boards.

The *siris* trees round the Dera Ismail Khan Circular Road, of which there are many, are now coming to their full age and are dying-off rapidly. They are being re-placed mainly by *shísham*.

Supervision.—As before the work of supervision is carried on by the Tahsildár and Náib-Tahsildárs in their respective tahsils under the Deputy Commissioner's direct control.

Tree planting in this district is rather up-hill work, and few of these officials take much interest in it of their own accord.

Some years back I compiled an abstract of instructions in the Arboricultural Manual for the use of Tahsildárs, regarding the maintenance of nurseries, planting of avenues, pruning, &c., but I have found that during the two periods I have been away from the district the whole matter was forgotten.

The method of planting trees and seedlings in this district continued generally to be the same as explained in the triennial report for the period ending 1892-93. The instructions in the Arboricultural Manual are followed as far as it is possible to make the native *mali* follow them. No trees under 4½ to 5 feet are transplanted from the nurseries to the roads. *Kíkar*, *shísham*, *kághal* (*farásh*) are mostly used for avenues. *Jáman* is doing well on the Public Works Department road to Tánk, near Tánk especially, and some seedlings will be grown in the Head-quarters' nursery for trial elsewhere. The blue gum does very well round Dera itself, and there are now several well grown clumps in the Municipal and private gardens. It has not been tried elsewhere.

Income and expenditure.—The following table shows the amount of income and expenditure for the three years ending 1898-99:—

Years	Income	Expenditure.	Difference.
1896-97	398	5,028	4,630
1897-98	649	4,360	3,711
1898-99	581	4,454	3,873

It will be observed that, that the District Board spends every year a very large sum on arboriculture. The abnormally large expenditure in 1896-97 is due to high prices of *bhúsa* and gram purchased for feed of bullocks.

The income has also increased as compared with that of three preceding years. Considering the arid character of the district the result is as good as can be expected.

It should be remembered that the extensive avenues along the Dera-Tank Road (41 miles), which has a canal cut flowing along some 6 miles of it, have been transferred to the Public Works Department along with the road itself. These are the only avenues that are likely to produce much income.

Fruit trees.—The fruit gardens at Dera, Leiah and Bhakkar are in good condition. In 1898-99 they suffered to some extent from want of rain. A number of new fruit trees, oranges, mangoes and pomegranates were planted in these gardens and are progressing favorably.

The trees and groves on the roads leading from Dera Ismail Khan to Pezu and Tánk are under the supervision of the Public Works Department. A grant of Rs. 35 per mensem is made for the maintenance of the roadside trees from District Funds, Rs. 2 for road leading to Tánk and Rs. 15 for that which leads to Pezu.

MONTGOMERY DISTRICT.

Rainfall.—The following table shows the rainfall of the three years under report as compared with the *Gazette* average rainfall:—

Year.										Actual yearly rainfall.	Average.
1896-97	...	...	...	...	...	...	...	...	...	9.14	10.76
1897-98	...	...	...	...	...	...	...	...	...	8.75	10.76
1898-99	...	...	...	...	...	...	...	...	...	4.12	10.76
Total										22.01	32.28
Average of 3 years										7.34	10.76

Nurseries.—No areas were specially set apart for nurseries.

Plantations.—Nil.

Groves.—Total area of groves existing in this district at the end of the triennial period under report was 746 acres as stated in the last report.

Avenues.—No avenues were planted during the three years under report. Nearly all the roads of the district are treeless. Water is too scarce for successful arboriculture.

Income.—The income from arboriculture during the three years under report was as below:—

									Rs.
1896-97	...	...	...	...	...	...	...	...	1,094
1897-98	...	...	...	...	...	...	...	...	740
1898-99	...	...	...	...	...	...	...	...	1,648
Total									3,482

Expenditure.—The expenditure incurred on arboriculture during the three years under report was as follows:—

									Rs.
1896-97	...	...	...	...	...	...	...	...	6,894
1897-98	...	...	...	...	...	...	...	...	5,839
1898-99	...	...	...	...	...	...	...	...	5,374
Total									18,107

The increase of Rs. 6,151 is chiefly due to the extension of gardens at Okára and Pákpattan and expenditure incurred in Station Garden at Montgomery.

Supervision of works.—The work was generally supervised by the Deputy Commissioner and Tahsildárs.

JHANG DISTRICT.

Rainfall.—The following table shows the rainfall for each of the past three years:—

Year.										Actual.	Average.
1896-97	...	...	...	...	...	...	...	...	...	7.68	8.61
1897-98	...	...	...	...	...	...	...	...	...	16.34	
1898-99	...	...	...	...	...	...	...	...	...	3.99	

The figures have been obtained from the *Punjab Government Gazette*. The fall has been markedly insufficient in 1898-99.

Nurseries.—The nurseries mentioned in the previous Arboriculture Report were maintained during the triennial period under report. In 1896-97, 3·63 acres were transplanted and in 1897-98, 15·82 acres were given up as follows :—

Transferred to groves	...	...	...	...	...	9·40
Transplanted	...	...	...	...	...	6·42
Total	...	...	...	...	...	15·82

In 1898-99, 9·88 acres were transferred to groves and 9·61 transplanted, the total area given up amounting to 19·49 acres.

Thus the area under nurseries at the end of the period under report amounted to 11·37.

The varieties of trees in the nurseries consist chiefly of *sharin*, *kikar* and *shisham*. In 1898-99, endeavour was made to grow some *pipal* and *bor* trees for roadside arboriculture, because such shady trees are really wanted in a hot district like Jhang for the comfort of travellers in the hot season. The young plants are flourishing in the nursery at Sadar.

The total number of trees planted on different roads is 1,000, out of which 336 were planted on the Jhang and Lyallpur Road. These trees are irrigated by canal water and are doing well. Besides this about 100 trees were planted on the Ghara Bhan Road and are watered from wells worked with bullocks.

A large number of roadside trees having died in the last cold weather, fresh plants were planted in their places.

In the colony a great majority of plants were removed from nurseries and transplanted by zamindars during last cold weather.

Plantation.—The only noticeable plantation in the district is that at Sahjowal situated on the left bank of the river Jhelum. The plantation being in very fertile soil furnishes a good supply of timber.

Recently some wood was brought to Sadar and sold. Grass and *munj* also grow well, and are a source of income. The plantation is supervised by a *chaukidar* who receives Rs. 7 per mensem from the District Fund.

Groves.—There has been some addition in the area under Grove during the triennial period under report.

Fruit trees.—In the Station Garden at Jhang grapes have not so far done well. Last year a large number of mango and other kinds of trees were destroyed by the frost.

The following fruit trees were obtained from Lahore, and planted in a garden formed near the *Kutchery* compound :—

Loquat, grafted	...	...	...	...	...	10
Guava, ordinary	...	...	...	...	...	10
Do. China	...	...	...	...	...	10
Citron, country (galgal)	...	...	...	...	...	10
Oranges	...	...	...	...	...	20
Lime (kaghzi)	...	...	...	...	...	10
Tuberozes	...	...	...	...	...	20
Litium	...	...	...	...	...	10
Amaranthis	...	...	...	...	...	10

Out of these 9 loquat and all the guava trees died during the last cold weather on account of the excessive cold.

For the District Board Garden at Shorkot the following fruit trees were supplied :—

Oranges of sorts	...	...	...	...	...	120
Pummelo	...	...	...	...	...	6
Pear	...	...	...	...	...	20
Peaches	...	...	...	...	...	40
Plantains	...	...	...	...	...	20
Loquat	...	...	...	...	...	20
Falsa	...	...	...	...	...	20
Jaman	...	...	...	...	...	20
Baid Mushk	...	...	...	...	...	10
Jasminum sambac	...	...	...	...	...	10

A Public Garden has also been established at Lyallpur which adds to the improvements under this head in the district during the period under report. Small ornamental gardens have also been started in the *Kutchery* compound.

Avenues.—Two miles of the Jhang and Lyallpur road were planted with 336 trees, out of which 63 failed.

At *Sadar* on two different roads mango trees were planted about one mile in length, but owing to the unusually severe frost that fell in the last cold weather a large number of them died. They were, however, replaced by *shisham* trees which are flourishing.

In *Chiniot* tahsil trees were also planted on the *Jhang* and *Chiniot Road* about two miles in length.

Roadside arboriculture in the colony has been a great success under this head during the period under report. In *Lyalpur*, Civil Station Roads may be seen planted with beautiful *shisham* trees, which owing to the ample supply of canal water have rapidly developed.

The Colonization Officer under whose supervision the plantation in the colony was undertaken writes about this as follows:—

"I embarked on rather an ambitious scheme of roadside tree planting in the *Lyalpur* tahsil on behalf of the District Board of *Jhang* who provided the requisite funds. An attempt was made to plant up or sow with tree seed five miles along each of the roads radiating from the three centres of *Lyalpur*, *Khuriánwala* and *Dichkot*, at each of which places there is a nursery. The Executive Engineer, 2nd Division, *Chenáb Canal*, was kind enough to assist me by making arrangements for the supply of water but my hastily dug channels have been found to be hardly sufficient for the purpose and want of funds has prevented me making them as sound and water holding as I could have wished. Something, however, has been effected, and I hope that I shall be able in the spring to replace the young trees which have died, re-dig certain lengths of water-courses and sow fresh seeds where that originally put down has failed to germinate. Although 3,295 young trees were planted out from the *Dichkot* Nursery, 1,327 from *Khuriánwala* and 2,256 from *Lyalpur*, I should be afraid to say how many of these are living. In sowing I adopted the plan of putting down a handful of seed at intervals in the places where I wanted trees to remain permanently instead of the more common practice of sowing continuously along the berm of a channel, should a tree result in each of the places where I have put down a fair handfuls of seed the District Board of *Jhang* would be credited with 7,336 trees along its roads. But, generally speaking, owing to hurried work and insufficient supervision, I am afraid this sowing has been rather a failure. In *Gujránwala* the Tahsildar of *Khángah Dógrán* has put down about 1,700 young trees and sown a length of two miles roadway with seed. I cannot say with what result. Of course the importance of tree planting in the colony is very great, and I hope that good will result from the small plantations which I have started in a very large number of villages on the *Rakh Branch*. I supply tree seed, and the lambardars are made responsible for the maintenance of these plantations."

In *Jhang Station* the roadside trees are watered either by *bhistis* or from wells worked with bullocks.

Income.—The income under different minor heads during the last three years was as follows:—

Year.	Name of Fund.	Ornamental gardens including crop.	Nurseries.	Plantation.	Groves and avenues.	Miscellaneous.	Total.
1896-97	District Fund	748	...	492	257	8	1,505
	Municipal Fund	168	...	...	368	...	536
1897-98	District Fund	863	...	574	784	...	2,221
	Municipal Fund	157	..	...	334	...	491
1898-99	District Fund	725	...	629	326	...	1,680
	Municipal Fund	163	...	...	415	...	578

In 1897-98 income from the Station Garden amounted to Rs. 863, and is chiefly due to the sale of green wheat which failed in 1898-99 owing to want of rain.

Expenditure.

Year.	By District Board.	By Municipal Committee.
1896-97	6,164	1,429
1897-98	5,225	1,189
1898-99	5,851	1,544
Total	17,240	4,162

BANNU DISTRICT.

Rainfall.—The rainfall during the triennial period under report has been distinctly above the average; that of 1896-97, however, owing to its unseasonability considerably failed in effect.

Nurseries.—The nursery at Isa Khel has been temporarily closed, the young trees it contained having all been transplanted to the various avenues. The nursery at Silwán has been washed away by the Indus. Consequently the only working nurseries now left are those at Manjiwála, Nowrang and in the Public Gardens, Edwardesabad. The former is 12 acres in extent, and contains timber trees, and the Edwardesabad Nursery measures 25 acres, and consists chiefly of fruit trees. The Nowrang Nursery is 0.15 acre.

Orders have been issued to the Tahsildars of Isa Khel and Míánwáli to make arrangements for the re-opening of nurseries within their charges. The common trees *shisham*, *khágal*, *tút* and *kikar* are obtainable for road-side planting without the help of nurseries.

Plantations.—The figures given in this statement under the years 1896-97, 1897-98, cannot be relied on.

As pointed out by my predecessor in the last triennial report there was reason to believe that the returns were incorrect, and that only about 500 acres were actually stocked with trees.

An inspection of the Settlement Records shows 2,320 acres nominally under forest and actual inspection shows the real number to be only 511.

The entry in column 6 of Statement No. III has consequently been made simply in order to make the result in column 7 correspond with the actual facts of the case.

Groves.—The condition of groves practically remains the same as before. The apparent increase is due to the inclusion under this head of areas formerly shown under the head "Plantations" and the addition of certain Municipal property.

Avenues.—The total extent of avenues in the district now measures 70.84 as compared with 63.06 miles in 1896.

The statement below shows the number of trees annually planted and with what result.

Year.									Planted.	Died.	Successful.
1896-97	...	...	...	...	...	...	...	...	2,548	417	2,131
1897-98	...	...	...	...	...	...	...	...	1,262	285	977
1898-99	...	...	...	...	...	...	...	...	2,338	800	1,538
Total									6,148	1,502	4,646

or 75 per cent. of those planted were successful.

There is an Arboriculture Sub-Committee in each tahsil, but as a matter of fact the majority of the work is done by the Tahsildárs and Girdáwar Kánungos.

Income.—The income continues to increase slightly and calls for little remark.

Expenditure.—This head also remains about the average, the only noteworthy points being the increased expenditure under column 3.

This is due to the efforts which have been made in the last year to improve the Public Gardens which have already brought considerable improvement, and will effect others which will not be apparent for some time.

SHAHPUR DISTRICT.

Rainfall.—The rainfall of the year under report was much less than that of previous year being 12.02 against 20.50, and owing to stopping of irrigation to the Civil Station lands of Shahpur very little could be done to extend the area under trees.

Nurseries.—A small addition has been made under nurseries.

Fruit trees.—746 fruit trees were sold to zamindárs of several villages in the Shahpur tahsil. 586 fruit plants were purchased from Agri-Horticultural Gardens, Lahore, and planted in the gardens at Sadar and also a new garden has been made near the Local Fund Office during the year under report.

Plantations.—There are no plantations in this District.

Groves.—A very little increase has been made in the area under Groves.

Avenues.—Owing to less rainfall and want of water the area under Avenues has decreased from 532 miles to 529 miles during the year.

Income.—There has been a great decrease in the income during the last year, which is due to the transfer of Chak Patri land to the Forest Department and also to the stopping of irrigation to the grass plots within the Civil Station which fetched less income this year.

Expenditure.—Owing to decrease in income the expenditure during the year was comparatively reduced.

HISSAR DISTRICT.

Income.—A detail of income realized during the three years under report is given in Statement VI.

The decrease of Rs. 1,040 in receipts in 1897-98 to that of the previous year is mainly attributable to the fact that in 1896-97 roadside trees (District Board) to the value of over Rs. 1,000 were sold, whereas in the year following the amount realized from this source was only Rs. 248.

There is, however, an increase in 1898-99 of Rs. 367 over the year previous. This may be put down to the same cause.

The decrease of Rs. 254 under the head "Municipal Fund" is due to the fact that no income was realized from "Plantations and Miscellaneous" during 1898-99.

The differences in other figures of the statement call for no remarks.

Expenditure.—There is an increase of Rs. 778 in the year 1898-99 over that previous, which may be accounted for by the improvements carried out to the Hissár Municipal Garden. Lowering the level of the garden for facilities of irrigation was the nature of the improvements effected. Other differences need no explanation.

Nurseries.—No new nurseries were made during the three years. Nor were any of the existing ones abandoned. There are 7 nurseries in the district in which, for the most part, *shisham*, *ním* and *kikar* trees are planted. They only cover a small area, but are in fair condition. Young trees from them are planted whenever required along district roads.

Plantations.—The only plantation in the district is that of the Hási Bir.

As there is a proposal to make over this Bir to the Civil Veterinary Department as part and parcel of the Hissár Farm, no new trees have been planted out in it, nor has the question of irrigation for the area under trees been looked into. It may be mentioned though that tree-planting in this Bir would never be a success. That portion of the Bir under trees abounds with white ants, and these animals are most destructive to them. In 1896-97 an area of 35 acres under head "Provincial Fund" which was planted out with young trees proved a failure. All the trees planted died.

Groves and Gardens.—The area under these remains the same though the latter have been improved in Hissár and in Hási, also Sirsa, and it is hoped that a suitable income will be shown from them in the next report.

Avenues.—The total length of roads planted with trees is as shown in the last report, i. e., 108.26 miles. There are 29 roads on which single lines of trees exist as will be seen from the accompanying map.

GENERAL REMARKS.

Arboriculture in the Hissár District is worked at a great disadvantage owing to the very scanty rainfall. Every effort is made to improve the working of it, but results are disheartening. Return No. I shows that the total rainfall for the 3 years was as follows:—

	Inches.									
1896-97	...	...	...	...	...	...	...	...	...	6.05
1897-98	...	...	...	...	...	...	...	...	...	23.95
1898-99	...	...	...	...	...	...	...	...	...	9.97

It will be seen from the above that satisfactory results cannot be produced. If we have good rains this year, tree-planting operations will be pushed on as far as possible. Wherever trees and gardens are commanded by canal-irrigation they thrive fairly well, but canal water can only be got in limited supplies, and unfortunately there are not many places that can be given this advantage.

II.—VERY DRY DISTRICTS.

FIROZPUR DISTRICT.

Avenues.—There was little, and in places insufficient, rain, and the *bhisti* system being very expensive, they were not employed, but according to the rule of the Forest Department the areas under groves and the miles of the roadside avenues were planted in 1897-98 and 1898-99 by water from the Inundation Canals of the district only, and it has already been noticed in the last triennial report that in the Punjab the *kikar* is the most useful tree for cultivation from all points of view, therefore mostly *kikar* has been planted in this district. The seeds were sown on the banks of the small ditches excavated along side of the roads where the water of the Inundation Canals can reach. The seeds both within the ditches and on the banks were sown where no water of Inundation Canals can be got, but we have to depend on rain only which, as stated above, was not sufficient throughout the period under report. However, the advantage of sowing seed both on the bank and inside the ditch is twofold, because if the water drowns the inside seed it will give good moisture to the soil on the bank, and thus help the seed to grow; on the other hand, if the water is too little to reach the seed on the bank of the ditch it will be just sufficient to help the seed inside the ditch to grow.

Plantations.—I also beg to report that 423 acres of the land of village Kairwála in the Fázilka tahsil was purchased by the Government for plantation in 1883-84 for Rs. 6,348-12-0, out of which the Government up to September 1897 planted 213 acres, and in 1898 the Government transferred the Kairwála Plantation for ten years to the District Board with effect from 1st September 1897, *vide* letter of Revenue Secretary to Government, Punjab, No. 75, dated 29th August 1898, on the terms that the Board will bear all expenses, and take all kinds of income, and that the land shall remain the property of Government, and it shall be kept under trees. The Board in 1898-99 planted 20 acres, out of which 3 acres failed.

Income.—The income from arboriculture in this district has decreased gradually in the last two years, because the Board now do not sell wood to the Arsenal as was the case during the past few years; moreover, so many matured trees have been cut down and sold during the several past years that it was considered wise to wait a little, and let the trees grow until it is worth while to sell them on wholesale rates.

Also the Mamdot Estate under Court of Wards in this district have planted nearly ten *ghumaos* of *kikar* near Mamdot by means of a water-cut brought from the Jalálwah Inundation Canal, and efforts were constantly made that when matured trees are removed by the owners of the land along side the Inundation Canals the gaps are filled by throwing seed on the canal embankment, which invariably grow well on account of the moisture derived from the canal.

Establishment.—I am glad to bear testimony to the good work done by the Dárogah, Muhammad Yoosaf, of arboriculture, who is active and intelligent, and knows his work thoroughly well and was trained at Chánga Mánga.

PESHAWAR DISTRICT.

Rainfall.—The statement shows the average rainfall for the past two years, and the year under report. The figures are obtained from the register of rainfall prescribed by the Financial Commissioner, Punjab.

Nurseries.—About 5 acres of land have been taken up for nurseries during the past three years.

Plantation.—Sufficient supplies of timber are floated down the Swát, Kábul, Bárah and Indus rivers. There is no special plantation for producing timber in the district.

Groves.—About 1 acre of land from nurseries was transferred to groves in the three years under report.

Avenues.—184 miles of road in this district were planted with young trees during the three years under review—42 miles failed, while 142 miles remained fully stocked with trees at the end of March last. The cause of failure is said to be insufficient water.

Income.—The income from district arboriculture during the three years under report was Rs. 9,842 or Rs. 5,909 in excess of the figures of the previous triennial period. The increase is due to large cuttings which were much needed.

The income in the Pesháwar Municipality under the same head was Rs. 7,580 against Rs. 6,488 in the previous triennial report.

The increase of Rs. 1,092 is due to the recovery of arrears in the three years under report.

Expenditure.—The expenditure on district arboriculture during the three years under report was Rs. 30,592 as below :—

	Rs.
Gardens	6,129
Avenues	24,463

Rupees 6,129 were spent on the maintenance of Ornamental Gardens. Trees of various descriptions were planted throughout the district at a cost of Rs. 24,463 or Rs. 3,099 less than the expenditure of the preceding years.

The expenditure in the Pesháwar Municipality under the head of Arboriculture was Rs. 9,453.

There is a difference of Rs. 305 when compared with the figures of the previous three years.

KOHAT DISTRICT.

Rainfall.—The annexed table shows the rainfall for each of the past six years compared with the average fall for the past twenty-six years and the rainfall registered at the outlying stations :—

Serial No.	Years.	Kohát.	Hangu.	Thull.	Banda Dáúd Shah.	Khushál-garh.	Fort Lockhart	REMARKS.
1	1893-94	19.51	36.54	18.46	22.71	14.38	...	
2	1894-95	25.81	33.94	18.04	30.60	17.72	...	
3	1895-96	11.28	23.15	10.86	18.14	7.44	...	
4	1896-97	14.89	20.15	21.51	20.76	14.12	...	
5	1897-98	18.97	28.32	28.74	29.68	9.01	...	
6	1898-99	13.37	26.81	17.04	22.95	...	7.16	
	Average for past 28 years ...	18.30	...	...	...	...	...	Note—The rain gauge at Khushálgarh was transferred to Fort Lockhart last year.

There was very little rain from the beginning of April to the latter part of June 1896. Some rain fell at the close of June, but it was not general throughout the district. Rain fell during July and August 1896 ; but it failed early in September. Some rain fell towards the close of September and floods came down in the Toi, but again there was no rain till the middle of January 1897 (except some on 29th November). Good rain, however, fell from January till the close of the year 1896-97.

Thus it will be seen that the rain was neither sufficient nor seasonable during the year, and therefore the flow of water in the Toi, on which the watering of trees mostly depends, often ran short or ceased altogether, and the trees consequently suffered to a great extent.

There was a good fall of rain during April and May 1897. Some rain fell in the beginning of June 1897, but not throughout the district.

There was sufficient rainfall during July and August 1897. Some rain fell early in September 1897, and the water in springs and Toi was sufficient, but there was no rain to speak of subsequently till December 1897, and consequently water in the Toi ran short though in the springs it was sufficient.

A fair amount of rain fell during December 1897, but it ceased in January 1898. There were again good rains in February and March 1898 extending all over the district.

The rains were on the whole favourable for arboriculture, and very few trees died during the year on this account though much damage was caused to the trees by transport animals during the disturbances on the North-West Frontier.

The rain that fell in June 1898 was insufficient, but there was a good rainfall in July 1898 throughout the district as also in August. In September, however, it failed at a critical time. October and November were quite rainless. Some rain fell towards the close of December 1898, but again there was no rain in January 1899. There was good rain in February, but again in March 1899 it failed at a critical time.

On the whole, the year was not favourable to arboriculture, the water in Toi having often run short. The trees on the Babar Mela Road in the Hangu tahsíl suffered severely, but special arrangements were made for watering trees on the roads near Kohát.

General remarks regarding the extension of arboriculture.—As stated in previous reports, this district has been classed as one of the very dry districts and its conditions are not favourable to arboriculture. The Teri tahsíl gets so little water that hardly any scheme of arboriculture can be successfully carried on there. Trees are, however, planted by the people themselves near wells, &c., where possible.

As regards the Hangu tahsíl, previously nothing was done in this direction by the District Board there. The people themselves planted trees where suitable places could be found, though owing to the large herds of goats, &c., possessed by every village, much damage is done, and comparatively few trees arrive at maturity. Considerable damage to trees is also done by nomad Waziris and Ghilzais' cattle which visit the district in immense numbers in the cold weather.

Immediately after my taking over charge of the district in 1897, I directed my attention to this important matter, but the only places where any improvements can be effected in arboriculture are Kohát proper and its neighbourhood, as also some places in the Hangu tahsíl. Steps were accordingly taken to extend arboriculture in this part of the district as far as funds and water were available, but owing to the following circumstances much success could not be achieved.

The drought of 1896-97 had caused many failures amongst the plantings made in the preceding year, while during the next year (1897-98) considerable damage was done to the roadside trees by Transport animals, etc., in consequence of the military operations on the North-West Frontier.

In the preceding triennial period, the planting of trees in avenues had been carried on on the following roads:—

Serial No.	Names of roads.	Length of road suitable for avenue.	Length of road fully stocked with trees.	REMARKS.
1	Jarwanda Circular Road	1	1	
2	Bizádi do.	1½	1½	
3	Tappi-Bahádur Kot Road	3	1	
4	Kharmatu Road	3	2½	
5	Sheikhan Road	3	1½	
6	Mír Khwáli Road	1	1	
7	Five minor roads within the Kohát Municipal limits	2	2	
	Total	14½	10½	

The only additions made since then were as follows:—

8	Two minor roads within Municipal limits	½	½	
9	Branch Road of Hangu-Thal Road to Káhi	1½	1½	
	Do. do. do. to Babar Mela	½	½	
	Total	2½	2½	
	GRAND TOTAL	17	12½	

Trees had been planted on Tappi-Bahádur Kot for three miles in the preceding triennial period, but they subsequently failed entirely. One mile of this road was stocked with trees during 1897-98.

Previously, the pay of *mális* was Rs. 5 each, but this was quite insufficient to make them supervise the trees properly. I therefore increased their pay from Rs. 5 to Rs. 8 per mensem by reducing the number of *mális* entertained, on the condition that they would water the trees by means of *pakháls* instead of by water through channels, with the result that very few trees, if any, dried during the past year as shown further on.

Nurseries.—Two small nurseries on the Jarwanda road and one in the Municipal Garden were given up during the triennial period under report, while two new ones—one on the Bizádi Road and the other on the Dhoda Road—were started.

Plants were transplanted from the nurseries to the road avenues. The supply in nurseries was not sufficient to meet the demand, and consequently plants were also obtained from private gardens, etc.

There was one small nursery in the Hangu tahsíl Garden in the preceding year (1897-98), but no trees were planted in it during the year 1898-99.

The trees in the nurseries at Kohat previously consisted chiefly of *pípal*, *kíkar*, *ber*, *shisham* and mulberry, but during the last year only *shisham* trees were planted. One maund of *kíkar* seed was lately obtained from Gujrát and distributed amongst the zamíndárs of the district for planting.

Avenues.—There are altogether 15 roads (including 7 minor roads within Municipal limits) on which avenues exist. These comprise an aggregate length of 16·822 miles, out of which 12·914 miles are stocked with 10,130 trees as against 9,012 at the end of the preceding triennial period. Previously the trees on several roads were small plants. They have now much increased in size. The annexed statement will show the progress made during each of the past three years in planting trees in avenues in charge of the District and Municipal Boards:—

NAMES OF ROADS.	Number of trees remaining on 31st March 1896.	PLANTED DURING 3 YEARS.				Number of trees died during three years 1896-97 to 1898-99.	Number of trees remaining on 31st March 1899.	REMARKS.
		1896-97.	1897-98.	1898-99.	Total.			
Jarwanda Circular Road	4,555	...	...	...	...	1,055	3,500	
Bizadi do.	2,282	...	18	...	18	...	2,300	
Tappi-Bahádur Kot Road	24	...	520	480	1,000	384	640	
Kharmatu-Dhoda Road	985	400	200	450	1,050	235	1,800	
Sheikhán Road	350	230	80	30	340	90	600	
Mir Khwáli Road	14	250	200	20	470	84	400	
Káhi Road	...	...	148	102	250	62	188	
Babar Mela Road	...	...	356	92	448	432	16	
Minor roads within Municipal limits ...	802	...	...	84	84	200	686	
Total ...	9,012	880	1,522	1,238	3,660	2,542	10,130	

In 1896-97 the area that failed on Kharmatu-Dhoda and Sheikhán as also on the Mir Khwáli Road was re-planted. No progress was made in extending area of avenues in consequence of drought.

In 1897-98, although 1,522 trees were newly planted, considerable damage was done to the roadside trees by transport animals, etc., in consequence of military operations on the North-West Frontier. A large number of small trees was totally destroyed by the animals, but the gaps were subsequently filled up by fresh plants as far as possible.

Trees were also planted on two roads in the Hangu tahsil. On one of these roads, viz., Káhi, 188 trees were reported to be thriving, and, similarly, on the Babar Mela Road in the last year (1897-98), 228 trees were in good condition, while during the year 1898-99, only 16 trees were reported to exist, the remainder having all dried up for want of water and proper care.

During the year 1898-99, 936 trees were planted on Tappi-Bahádur Kot and Kharmatu-Dhoda Roads, of which only a few died, special arrangements having been made for watering them.

Groves.—There are no groves in the district except two small ones on the Jarwanda Road and two in the Hangu Sub-Division. The area shown in Statement IV (viz. 25·835) includes the area under groves in the compounds of schools, dispensaries, *thánás* and *dák bungalows*.

Ornamental Garden.—There is one Public Garden at Kohát in charge of the Kohát Municipal Board. It contains various kinds of fruit trees such as guavas, *loquats*, peaches, mangoes, *jámans*, plantains, orange, etc. The annexed statement shows the receipts and expenditure of the garden during the past six years.

YEAR.	Receipts.	EXPENDITURE.			Deficit.	Surplus.	REMARKS.
		Pay of establish- ment.	Miscellaneous ex- penditure.	Total.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1893-94	615	612	413	1,025	410	..	
1894-95	568	619	285	904	336	..	
1895-96	875	624	245	869	...	6	
1896-97	801	688	266	904	108	..	
1897-98	310	513	331	844	534	..	
1898-99	455	680	506	1,186	731	..	

The falling-off in the income during the last two years as compared with 1896-97 is due to the fact that certain plots which used to be utilised for the cultivation of vegetables in previous years have now been turned into recreation grounds for the benefit of the people of the town and cantonments. The pay of the *malis* has been raised, and iron benches, grass machines, water pump and some other implements have been obtained which account for the increased expenditure during 1898-99, under the head "Miscellaneous Expenditure." There are also two small Public Gardens at Hangu, one attached to the dāk bungalow, and the other to the tahsíl. One *jamadár* on Rs. 8 per mensem, and one *máli* on Rs. 6 per mensem, have been entertained to look after these gardens.

Income and Expenditure.—The annexed statement shows the income and expenditure on account of arboriculture (excluding that on account of Public Gardens as shown in the preceding paragraph) during each of the last three years as compared with the preceding triennial period.

YEAR.	Income.	EXPENDITURE.			REMARKS.
		Estab- lishment charges.	Miscel- laneous charges.	Total.	
	Rs.	Rs.	Rs.	Re.	
1893-94	...	612	364	976	
1894-95	32	1,725	888	*2,613	* Includes Rs. 1,500 sanctioned by Government out of the amount collected on account of grazing dues from the trans-border tribes.
1895-96	77	1,232	549	1,781	
1896-97	62	720	150	870	
1897-98	67	852	157	1,009	
1898-99	28	942	188	1,130	

The income realized is on account of sale-proceeds of grass on roadsides. Only the sum of Rs. 12 was realized during the last three years for the lopping of trees. No large income from lopping, etc., can be expected as fuel is cheap and easily procured in this district.

The increase in expenditure during the last two years as compared with 1896-99 is due to the entertainment of two *malis* at Rs. 6 each for the new roads and groves in the Hangu tahsíl as also to the increase in the pay of *malis* at Kohát as shown in the statement in the next paragraph.

Establishment.—The following establishment was employed during each of the past three years on Arboriculture and Public Gardens :—

Year.	Number of men employed.		Cost per mensem.	Cost per annum.
	DISTRICT FUNDS.			
		Rs.		
1896-97	For roadside trees	1. Jamadár ...	@ 10	= 10
		1. Ranger ...	@ 6	= 6
		7. Rangers ...	@ 5	= 35
		2. " ...	@ 1	= 2
				53
	For public garden at Hangu ...	1. Jamadár ...	@ 8	= 8
		2. Mális ...	@ 6	= 12
				20
1897-98	For roadside trees	1. Jamadár ...	@ 10	= 10
		3. Rangers ...	@ 6	= 18
		1. " ...	@ 1	= 1
		7. " ...	@ 5	= 35
				64
	For public garden at Hangu ...	1. Jamadár ...	@ 8	= 8
		6. Mális ...	@ 2	= 12
				20

Years.		Number of men employed.	Cost per mensem.	Cost per annum.
		DISTRICT FUNDS—concluded.		
			Rs.	Rs.
1896-99	For roadside trees	{ 1. Jamadár ... @ 10 4. " ... @ 8 3. " ... @ 6 1. " ... @ 5 1. " ... @ 1	= 10 = 32 = 18 = 5 = 1 ——— 66	792
	For public garden at Hangu ...	{ 1. Jamadár ... @ 8 2. " ... @ 6	= 8 = 12 ——— 20	240
		MUNICIPAL FUNDS.		
			Rs.	Rs.
1896-97	For roadside trees	{ 1. Ranger ... @ 7 1. " ... @ 5	= 7 = 5 ——— 12	144
	For public garden at Kohát ...	{ 1. Jamadár ... @ 10 6. Málís ... @ 6 1. " ... @ 4 1. " ... @ 1	= 10 = 36 = 4 = 1 ——— 51	612
1897-98	For roadside trees	{ 1. Ranger ... @ 6 1. " ... @ 5	= 6 = 5 ——— 11	132
	For public garden at Kohát ...	{ 1. Jamadár ... @ 15 1. Mali ... @ 9 4. " ... @ 7 1. " ... @ 1	= 15 = 9 = 28 = 1 ——— 53	636
1898-99	For roadside trees	{ 1. Ranger ... @ 8 1. " ... @ 6	= 8 = 6 ——— 14	168
	For public garden at Kohát ...	{ 1. Jamadár ... @ 15 1. Ranger ... @ 9 4. " ... @ 7 1. " ... @ 1	= 15 = 9 = 28 = 1 ——— 53	636

Cultivation of fruit trees and their distribution amongst villagers.—No attempt has hitherto been made to cultivate and distribute fruit trees amongst villagers, nor has it been found necessary to do so. Where water is available and soil is good, people themselves are anxious to start gardens and plant fruit trees. Much energy has been displayed by them in planting fruit trees of different varieties.

The private gardens at Kohát and Hangu are in a flourishing condition and yield a fair return. As stated in the previous report, the Arabian date-palm seedlings, which were distributed amongst the leading men and agriculturists of the district, proved mostly a failure. In a few places, however, they are doing very well. Out of 57 plants in Shahzada Sultán Jan's Garden, 13 have fruited, and it is expected that most of the remaining plants in this garden will bear fruit next year.

During the triennial period the following number of fruit trees were received from Mahásu Orchards at Simla for distribution :—

	February 1897.	February 1898.
Apples ...	100	...
Apricots ...	50	...
Pears ...	100	50
Peaches ...	50	200
Cherries...	...	13
Plums ...	...	50
Total ...	300	313

The first supply was planted at Hangu, Fort Lockhart, and in the public garden at Kohát. About half of the trees planted died and the remainder are reported to be doing fairly well. Of the trees received in February last, pears planted in the Municipal Garden have all died, the other trees are doing well.

Planting of fodder trees.—The people are apathetic in this matter to the last degree, and care nothing so long as their flocks and herds can eke out an existence on the present scanty grazing. The District Funds are, however, too poor to enable anything being done in this direction.

ROHTAK DISTRICT.

Rainfall.—The rainfall of the period under report compares as follows with that for two preceding triennial periods :—

1896-97	...	9.39	1893-94	...	46.71	1890-91	...	23.57
1897-98	...	20.44	1894-95	...	34.96	1891-92	...	14.86
1898-99	...	18.60	1895-96	...	12.75	1892-93	...	32.28
Total	...	48.43	Total	...	99.42	Total	...	70.71

The period under report began with the acute famine of 1897 and very slight rainfall. It was followed by a year of comparative ease, but was not such as would have fully compensated for the loss of the preceding year. It had a rainfall of 20.44, i. e., 0.25 above normal, but this small increase did not help arboricultural projects much. The next year was again bad and thus the whole period under report was of the nature which did not allow any achievement to be made in the progress of arboriculture. This district has got a peculiarity which becomes more perceptible when there is scarcity of rain, namely, the water of the wells become brackish and unfit for plantations. The tanks had been dried up for the most part of the year, the water in the wells was not suitable to arboriculture, and thus no fair progress in that line could have been expected under the circumstances. The result of this period is therefore not what could be desired.

The figures given above indicate the rainfall of the head-quarters of the district only, and the rainfall of the various tahsils of the district is given below. I append also the average rainfall fixed for each tahsil for convenience of comparison.

	1896-97.	1897-98.	1898-99.	Average.
Gohána	12.60	17.25	16.81	20.07
Sámpla	11.86	20.57	12.71	20.83
Jhajjar	13.09	23.61	15.81	19.75

The above figures are not also very encouraging, and except an increase in the Jhajjar tahsil in 1897-98, there has been a marked decrease all over the other tahsils during the three years under report. But the increase in the Jhajjar tahsil even is not of any account, as this tahsil is entirely dependent upon rain and the trees can only prosper when there are heavy rains.

Nurseries.—The number of nurseries in the district is the same as in the period ending with year 1895-96; namely, two at Sadr, one at the head-quarters of each outlying tahsil. They supply trees for extending roadside avenues or replacing dried ones in them. The area under them has decreased by 0.08 of an acre during this period. The principal plants growing in them are *shisham*, *jáman*, *pípal* and *ním*. The last-named tree grows luxuriantly in this district and the soil agrees with it. *Shisham* is also becoming a favourite now, although it does not grow to the same size as in other more prosperous districts of the Province. *Pípal* is also seen occasionally but *jáman* mostly die when transplanted from the nursery. Mango trees have been planted in Gohána Nursery last year and there is every hope of their doing well, as the whole of this tahsil is watered by canals, and there are several Mango Gardens adjoining the rest-houses of the Canal Department, notably at Butána.

Groves.—The area under groves during the period under report is the same as in the last period, namely, 543.94 acres. Practically speaking there are no regular groves in this district nor can the people afford to have such luxuries.

Single trees or sometimes two or three or more at the same spot may be seen in different court-yards in a village for shade or for the sake of wood, but they cannot be styled groves. Besides each village has got a tank or two and some land is left as a watershed for it, and some coarse plants, namely, *kikar*, *jál*, *jand*, *karil* and *ber* shrubs grow there, but no pains are taken to ameliorate its condition. There are some gardens, two in the district, four at Sadri exclusive of District Board Gardens, and some in the other tahsils, but the principal trees are grafted *ber*. An attempt has, however, been made to extend them and grow better trees in the Gohána tahsíl where three gardens have been planted recently in three villages.

Avenues.—Statement No. V shows that there has been an increase of 4.25 miles of planting trees alongside the roads during these three years. There are altogether 27 roads in this district planted with trees which cover an area of 201.18 miles.

The annexed table shows the number of trees planted and which died during the period under report in the district :—

Name of Tahsíl.	Number of trees previously existed.	Planted during the three years under report.	Total.	Number of trees which died.	Number of trees remaining.
Rohtak	11,395	824	12,219	824	11,395
Jhajjar	17,107	1,694	18,801	2,479	16,322
Sámpla	15,813	1,438	17,251	3,545	13,706
Gohána	11,403	684	12,087	289	11,798
Total	55,718	4,640	60,358	7,137	53,221

With the exception of tahsíl Gohána there has been a decrease of trees growing on roads all over the district, and the reason is that the most part of the period under report had scanty rain. There are two ways of planting trees on the roads, first by transplanting them from nursery gardens, and secondly sowing *kikar* seeds in the drains alongside them in the rainy season. The former are properly taken care of by *mális* and *bhishtís*, but the latter are left at the mercy of zamíndárs who uproot them whenever they can get a chance, as *kikar* trees do not allow crops to flourish under their shade.

Expenditure and income.—The total income during the period under report amounted to Rs. 4,923 as compared with Rs. 4,490 of the preceding period, and the total expenditure was Rs. 16,706 against Rs. 13,854 of the last period. The difference in income and expenditure items of both periods is due to the fact that the income from, and expenditure on, ornamental gardens was not included in the returns for the last triennial period. The following figures will show the difference in income and expenditure of the two periods under each head :—

Income.	Period under report.	Preceding period.
	Rs.	Rs.
Groves and avenues	3,159	4,180
Miscellaneous	276	310
Total	3,435	4,490
Ornamental gardens	1,488	...
Expenditure on groves, &c.	12,843	13,854
Ditto gardens	3,863	...

These figures show that there has been some increase in income and expenditure in the period under report, but this increase of expenditure is nothing when compared to the drought during this period, and similarly the increase in income was due to a cyclone of 13th May 1898, which uprooted many trees and made wood for market. But there is no hope of ever equalising income and expenditure in this district, because it is a very dry district and only coarse trees can be planted in it which find a market for fuel only. The principal trees growing in this district are *nim*, *kikar*, *farúsh*, *siris* and *shisham* of stunted growth which cannot be used for house material or any other such useful purpose and do not fetch a good price. Efforts are, however, made to plant better trees and extend the avenues as much as possible. It may also be noted that the only income in this district is the sale of loppings or trees fallen down, while in other districts there are other heads for it too, namely, Sale of grass, &c. Another experiment was made here for constantly keeping the plants moist, namely by burying a *matka* (a pitcher) by the side of the plant with a small hole under it to let the water drip, but no perceptible success has so far been attained, and I doubt if the method is likely to succeed.

LAHORE DISTRICT.

Rainfall.—The following table shows the rainfall of the district in each of the past three years :—

District.	1896-97.	1897-98.	1898-99.
Lahore	9·86	18·55	13·41

The total rainfall of the period under report was less by 18·9 inches than that of the past three years.

The following table shows the rainfall for each tahsíl during the triennial period under report :—

Tahsíl.	1896-97.	1897-98.	1898-99.
Lahore	9·86	18·55	13·41
Kasúr	6·14	19·45	8·74
Chúnián	10·00	16·81	7·54
Sharakpur... ..	13·90	14·73	15·83

There was no drought or other calamity in any part of the district especially affecting arboriculture operations. The reports of all four Tahsildárs on the avenues, groves and nurseries under their care are fairly satisfactory. The district arboricultural establishment was principally employed on roadside avenues watering, and on tending roadside trees.

Avenues.—During the past three years the work in connection with plantation of avenues was chiefly confined to filling up gaps on old lines of road; very little new work was undertaken.

The District Board has only employed a small number of coolies to look after the roadside trees. This establishment is unable to take up new lines of road, and the Board is too badly off at present to spend more money on tree planting.

The tree planting operations within municipalities have been shown separately.

The following is a detail of lengths added in each of the four Tahsils :—

Name of Tahsíl.	1896-97 to 1898-99.	1898-94 to 1895-96.
Lahore	...	17·250
Kasúr	...	...
Chúnián	2500	5·769
Sharakpur	...	2·750

Fruit trees.—Fruit trees were planted by the following persons in—

Tahsíl Chúnián.

Nawáb Khan, Zaidár Bugiána.
 Sardár Bahádúr Sardár Suján Singh.
 Ghanya Lál, son of Mahtába Mal.
 Jowáhar Singh, at Chhana Urla.
 Solakhan Singh, at Abádi Rakh Dhála.
 Abdul Rahím Khan, at Umrabad.
 Sardárni Bishen Kour, at Burga.
 Sardár Káhan Singh.
 Fateh Singh and Hákim Singh, at Kot Sáiín Dás, i. e., Punon Singlwála.
 Tahar Singh, at Kot Sáiín Dás, i. e., Gilánwála.

Tahsil Sharakpur.

Kaim Dín, Zaildár, at Nátha.
 Mohammad Dín, at Nangal Kishtewár.
 Foroze Dín, at Sheikhpur Bedád.
 Bál Mokand, Lambardár, at Kot Hidáyat Ali.
 Khudáyár, at Abdúl Khair.
 Rám Kishen, at Dáhar.

Tahsil Kasúr.

Lehná Singh, at Tung, 21 kanáls.
 M. Mubárik Beg, at Patti, 99 kanáls.
 Lehna Singh, at Orára, 5 kanáls.
 Sobha Singh and brother, at Sarháli Khurd, 4 kanáls.

The following plants were received from the Government Agri-Horticultural Gardens, Lahore, during 1898 :—

Apple trees, European	...	...	...	...	...	12
" " country	...	...	...	...	...	25
Apricot "	...	...	...	...	...	25
Figs, imported	...	...	...	...	...	25
Grape vines	...	...	...	...	...	25
Loquat, grafted	...	...	...	...	...	12
Mangoes, grafted	...	...	...	...	...	36
Nectarine	...	...	...	...	...	12
Orange, Malta	...	...	...	...	...	12
" country	...	...	...	...	...	12
Citron of sorts	...	...	...	...	...	25
Lime	...	...	...	...	...	25
Lemon	...	...	...	...	...	12
Pommelo, country	...	...	...	...	...	12
" imported	...	...	...	...	...	2
Peach	...	...	...	...	...	25
Pear, European	...	...	...	...	...	12
" country	...	...	...	...	...	12
Plantains, Bombay	...	...	...	...	...	12
" Calcutta	...	...	...	...	...	12
" Country	...	...	...	...	...	10
" other imported	...	...	...	...	...	12
Plums, Jápan	...	...	...	...	...	12
" Country	...	...	...	...	...	25
Persian date trees	...	...	...	...	...	30
Arabian date trees	...	...	...	...	...	6
Dera Gházi Khan date trees	...	...	...	...	...	18
Figs, European	...	...	...	...	...	32

These were planted in the Shahdara and Shalámár Gardens. Some of these trees have thrived, others, more especially in the Shahdara Garden, where water is scarce, have died out.

The Sub-Overseers at Kasúr, Cháníán, and the Veterinary Assistants at tahsils Lahore and Sharakpur supervised all planting operations in addition to performing their own duties.

Income and expenditure.—The following is an abstract of the detailed statement of establishment employed and the cost during the past three years :—

Name of Tahsil.	ESTABLISHMENT.			Cost.		
	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.
				Rs.	Rs.	Rs.
Lahore	14	13	13	935	782	734
Kasúr	13	12	12	759	622	663
Cháníán	11	9	9	626	541	455
Sharakpur	12	10	10	712	585	588
Total	50	44	44	3,032	2,530	2,440

A reference to the detailed statement of expenditure will show that out of Rs. 3,036, Rs. 3,931 and Rs. 2,959 expended during past three years, Rs. 2,530, Rs. 3,032 and Rs. 2,440, respectively, were for establishment, which was employed in each tahsil during the past three years for the maintenance of trees on different roads and nurseries.

The decrease in outlay is attributable to the fact that funds being exhausted on Famine Relief Works in tahsíl Sharakpur the services of some men were dispensed with.

Name of Tahsíl.	INCOME.			EXPENDITURE.		
	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Lahore	108	486	161	1,254	994	929
Kasúr	530	244	140	1,184	771	639
Chúnián	338	625	234	780	679	599
Sharakpur	98	440	207	713	593	602
Total	1,074	1,795	742	3,931	3,037	2,960

The above statement shows the financial results of the period under report.

KARNAL DISTRICT.

Rainfall.—It will be observed from this statement that the rainfall during the past three years has been much below the average, the rains failing when they were most wanted to mature the crops. As regards the winter rains they were not only unseasonable but too scanty to do any good.

Nurseries.—The only new nurseries established during the past three years were one at Karnál and one at Thánesar covering an area of 1·85 acres of land. An old nursery at Thánesar comprising ·04 acre was also transferred to this district with the Pípli Tahsíl during 1897-98, making a total in all of 1·89 acres, of which ·04 acre was turned into groves owing to the trees in the old nursery at Thánesar having grown too big for transplanting. No nurseries were added during the remaining two years 1896-97 and 1898-99, thus the area under nurseries at the close of the year 1898-99 was 10·38 acres which contained 10,714 young plants or 3,614 trees more than there were at the close of the previous three years. The number of the trees supplied by these nurseries for planting on roads was 4,741. The nurseries are all irrigated from wells.

Plantations.—With the exception of few protected *rakhs* in the Karnál and Kaithal Tahsils which are treated of in the Annual Revenue Reports there are no plantations in this district.

Groves.—The number of groves which existed at the beginning of the triennial period under report amounted to 15, to these two more groves were added during the year 1897-98, comprising an area of ·66 acre; these were transferred from Umballa to this district with the Pípli Tahsíl. The total number of groves at the end of March 1898-99 was therefore 17 which contained an area of 318·03 acres. There were 3,198 trees in these groves at the beginning of 1896-97. Of these 98 trees died during the three years, 8 were newly planted in place of those that died, and 375 trees were received by transfer from Umballa with the Pípli Tahsíl. Thus leaving a total of 3,483 trees at the close of the year 1898-99.

Avenues.—The tree planting operations carried on during the past three years are as follows :—

	1896-97.	Miles planted.	Number of trees planted.
Karnál-Asandh Road	...	0·53	200
Do. Jagádhri Road	...	0·53	200
Pánipat Sessions House Road	...	0·07	26
Do. Salwan Road	...	0·20	75
Do. Railway Station	...	0·09	32
Do. Rohtak Road	...	0·20	75
Do. Allupur Road	...	0·31	117
Gadiwára Road	...	0·10	38
Kaithal-Salwan Road	...	0·53	200
Do. Thánesar Road	...	0·27	100
		2·83	1,063
	1897-98.		
Thánesar-Ládwa Road	...	3·10	160

1898-99.

No new operations in tree planting were extended during 1898-99 for want of proper rains.

The figures shown in column 5 of the statement for 1897-98, viz., 29.60 miles, represent the area transferred to this district from Umballa during that year. These are fully stocked with 15,013 trees planted on the different roads.

Besides the above, 3,518 young trees were planted out on various roads during the period under report to fill up gaps. The number of trees that died during the past three years amounts to 5,918. These include dry and fallen trees sold during the period, the proceeds amounting to Rs. 1,737.

Young trees are protected from the ravages of cattle by thorn fences and mud wall^s or *gamlas* erected round the trees. The irrigation is done from wells by *bhishtis* and *pakhalis* employed for the purpose, and the tending is done by *malis* and *chaukidars* employed on different roads in the district.

Cattle found damaging the trees are impounded under the Cattle Trespass Act, and sent to the nearest pound.

Lopping of trees is done whenever it is found to be absolutely necessary. The planting operations are usually carried out during the rains, but in cases of necessity it is also done during February and March, provided the weather is not too hot in the latter month.

The subjoined memo shows the results of the arboriculture operations of the past three years :—

Year.	Trees remaining at the beginning of the year.	Trees planted during the year.	Died.	Remaining at the close of the year.
1896-97	29,115	1,540	1,614	29,041
1897-98	45,245	1,185	1,493	44,937
1898-99	44,937	2,016	2,811	44,142
Total	...	4,741	...	...

Income and Expenditure.—The table below exhibits the income and expenditure for the past three years :—

PARTICULARS.	DURING			Total.	Surplus.	Deficit.
	1896-97.	1897-98.	1898-99.			
INCOME.						
	Rs.	Rs.	Rs.	Rs.		
Sale of fruits and vegetables	212	190	440	842		
Sale of trees	484	290	963	1,737		
Lopping of trees	8	...	11	19		
Sale of grass	51	51	70	172		
Total	755	531	1,484	2,770		
EXPENDITURE.						
<i>Nurseries.</i>						
Establishment	233	489	577	1,299		
Cost of feed of bullocks, &c.	126	118	104	348		
Repairs to wells, huts, &c.	49	26	101	176		
Miscellaneous	25	34	208	267		
Total	433	667	990	2,090		
AVENUES.						
Supervising establishment	769	768	708	2,245		
Watering charges	3,787	3,299	3,614	10,700		
Tools and plants	84	31	57	172		
Planting and fencing	395	176	218	789		
Other miscellaneous expenses	685	528	833	2,046		
Total	5,720	4,802	5,430	15,952		

As already stated in my previous report, the experiments made with the date-palm have not been satisfactory so far, as out of all the savings made from time to time there are only about 56 plants reported to exist. These are said to be in good condition. The failure seems to be through lack of interest on the part of those to whom the seed was distributed for sowing.

Some experiments were also made with the Inga Dulces Mimosoca, a hedge and fodder plant. About 50 plants out of 150 which germinated are surviving, and are in good condition; they bore pods last year and this year. A good supply of seed has again been sown this year and they have freely germinated. This is said to be forming large and impenetrable hedges in Madras.

III.—DRY DISTRICTS.

JHELUM DISTRICT.

Rainfall.—The average rainfall in each tahsil of this district during the three years under report was as follows:—

Tahsil.	1896-97.	1897-98.	1898-99.	Average.
Jhelum	20.36	25.12	23.57	23.01
Pind Dádan Khan	12.24	18.4	13.43	14.69
Chakwál	18.52	23.37	16.91	19.6
Talagang	14.47	20.02	18.64	17.71
Total	65.59	86.91	72.55	75.02
Average	16.4	21.73	18.14	18.75

The average rainfall for the three years now under report is less than that for the three years last reported on.

Nurseries.—The additional area brought under nurseries during each year under report was as follows:—

	Acres
In 1896-97	162
„ 1897-98	086
„ 1898-99	1437
Total	1685

As compared with the year 1896-97 the year 1897-98 shows a decrease of .076, while the year 1898-99 shows an increase of 1.275 and the year 1898-99 as compared with the year 1897-98 shows an increase of 1.351. The increase in 1898-99 is due to the plantation of nurseries in the Pind Dádan Khan Tahsil, but it failed owing to insufficiency of rain.

Plantations.—There being no area under “Plantations” in this district this statement is blank.

Groves.—There was no increase in the area under “Groves” during the three years under report.

Avenues.—During the years under report the planting on roadsides was as given below:—

Roads.	Years.	Total length newly planted.	Total length failed.
Belonging to District Board.	1896-97	7.286	.557
	1897-98	11.998	3.074
	1898-99	7.933	1.736
Do. Municipal Committee	1896-97	.301	.057
	1897-98	.356	.14
	1898-99	.677	.214

DISTRICT BOARD.

As compared with the year 1896-97 there was an increase in the mileage newly planted in 1897-98 of 4.712 and of .647 of a mile in the year 1898-99, and the year 1898-99 as compared with 1897-98 shows a decrease of 4.065. The increase in the year 1897-98 was due to plantation on the Gatáliyan Road in the Jhelum Tahsil and on the Jalálpur Road in the Pind Dádan Khan Tahsil, and on the road leading to the Talagang Tank in the Talagang Tahsil.

MUNICIPALITIES.

The increase in 1897-98 as compared with that in 1896-97 is slight and calls for no remarks.

The year 1898-99 shows an increase of .376 of a mile as compared with the year 1897-98. This increase is due to roadside planting in the Pind Dádan Khan Municipality.

The statement given below shows the number of trees which were planted and the number that failed during each year of the period now under report:—

District Board.

Tahsil.	1896-97.		1897-98.		1898-99.	
	Planted.	Failed.	Planted.	Failed.	Planted.	Failed.
Jhelum	786	72	955	201	1,023	40
Pind Dádan Khan	349	...	795	51	530	300
Chakwál	...	...	80	...	1,200	425
Talagang	274	39	2,200	893	397	120
Total	1,409	111	4,030	1,145	3,150	885

MUNICIPALITIES.

Name of Municipality.	1896-97.		1897-98.		1898-99.	
	Planted.	Failed.	Planted.	Failed.	Planted.	Failed.
Jhelum	106	20	...	...	...	...
Pind Dádan Khan	...	...	188	74	325	112
Total	106	20	188	74	325	112
GRAND TOTAL	1,515	131	4,218	1,219	3,475	997

The total number of trees planted during the three years under report was 9,208, of which 2,347 or 25.5 failed. The percentage of failure as compared with the three years previously reported is nearly thrice, which is due chiefly to want of rain at the proper time.

The trees planted on roadsides in the Jhelum Tahsil were obtained from the Chak Jamál and Sheikhupura Nurseries; in the Pind Dádan Khan Tahsil from the Choha Saidan Shah Garden and the wells of a village named Dhariála; in the Chakwál Tahsil from small nurseries on the roadsides; and in the Talagang Tahsil from nurseries near the wells of zamindárs.

All trees are looked after by the general establishment and are inspected from time to time by the Tahsildárs and by all District Officers when on tour.

Income.—The income for the years under report is detailed in the statement below:—

Years.								Gardens.	Groves and avenues.	Total.
								Rs.	Rs.	Rs.
1896-97	...	...	...	...	...	...	...	1,111	2,509	3,620
1897-98	...	...	...	...	...	...	...	1,552	1,750	3,302
1898-99	...	...	...	...	...	...	...	1,474	1,895	3,369
Total								4,137	6,154	10,291
Total income from 1893-94 to 1895-96								2,741	6,993	9,734

The above figures show an increase of Rs. 557 during the three years now under report as compared with the three years last reported on.

Expenditure —The statement given below furnishes a detail of the expenditure during the three years under report—

Years.								Gardens.	Establishment.	Total.
								Rs.	Rs.	Rs.
1896-97	...	...	...	...	...	...	...	3,306	3,361	6,667
1897-98	...	...	...	...	...	...	...	3,207	3,514	6,721
1898-99	...	...	...	...	...	...	...	3,172	3,487	6,659
Total								9,685	10,362	20,047
Total expenditure from 1893-94 to 1895-96								9,065	8,323	17,388

The above figures show an increase of Rs. 2,659 as compared with the expenditure of the three years last reported on. The increase is due to scarcity of fodder and carriage and plantation of trees.

The establishment maintained during the three years under report was nearly the same as in the three years last reported on.

After deducting the total income for the three years from the expenditure for the same period the net expenditure stands at Rs. 9,756 or an average of Rs. 3,252 per annum.

GUJRANWALA DISTRICT.

Rainfall.—The rainfall for the years 1896-97 to 1898-99 is shown in statement No. I, which gives details of the summer and winter rains. It will be seen from the statement that the rainfall during the three years under report was far below the average. In the first two years the rainfall was exceptionally deficient and for this reason scarcity prevailed all over the district, while in the third year it was a little above the rainfall of the preceding years though below the average.

Want of sufficient rainfall greatly impeded the progress of arboriculture. The following table shows the rainfall during the three years under report as compared with the figures for the preceding triennial period:—

1893-94	...	...	...	...	...	...	...	43.32
1894-95	...	...	...	...	...	...	...	28.42
1895-96	...	...	...	...	...	...	...	19.53
1896-97	...	...	...	...	...	...	...	12.30
1897-98	...	...	...	...	...	...	...	15.66
1898-99	...	...	...	...	...	...	...	20.44

Nurseries.—The area under nurseries at the beginning of the period under report was 164.44 acres, while in 1896-97 a fresh area of 6.43 acres of land was added to the nurseries in the colonization area on the Chenáb Canal. During the year 1897-98 another addition of 0.13 acre was made to the nurseries in the Wazirabad Tahsil, but as 0.12 acre of this was transplanted, the area at the end of the year came up to 170.88 acres.

Again during the year 1898-99 a fresh area of 0·01 acre of land was planted and added to the nurseries in the Gujránwála Tahsíl, but it dried up and no further addition was made.

There are at present nine nurseries, all in the Khángah Dográn Tahsíl, as described below :—

	No.	Acres.
1. Nursery at Karkan village	168	12·9
2. Do. at Pathránwáli village	167	13·7
3. Do. at Pacca Dalla „	78	8·5
4. Do. at Baddo Malhi „	113	38·5
5. Do. at Shahkot Mauza „	84	7·7
6. Do. at Moman village	30	28·1
7. Do. at Chhapanwali village	2	16·67
8. Do. at Bijwána „	6	17·30
9. Do. at Sāngla „	43	27·50

WAZIRABAD TAHSIL

I. Small nursery Kot Jafir in Wazirabad Tahsíl	0·01
Total area	170·88

The total expenditure incurred on the maintenance of these nurseries during the period ending with 1898-99 was as follows :—

	Rs.
1896-97	879
1897-98	755
1898-99	70

while the income realized for that period amounted to Rs. 66, Rs. 83 and Rs. 40 respectively. An establishment consisting of 1 *mālī* at Rs. 9 and 1 cooly at Rs. 7 per mensem was employed by the District Board for each of the nurseries, but from the beginning of 1898-99 the direct payment of salaries was dispensed with and in lieu thereof each of the *mālīs* and coolies was allowed to cultivate about half a square of spare land (14 *ghumaos*) from each of the nurseries for his private maintenance. The nurseries are all irrigated by the Chenab Canal free of cost and the arrangements are working satisfactorily.

A large number of *shisham* and *kikar* trees of different sizes are now standing in the nurseries and colonists are allowed free of cost any number of plants required for their private use. Areas occupied by large trees not fit for transplanting will, however, be transferred to groves during the current year.

It is under consideration of the District Board to provide nurseries in different parts of the District at convenient spots to facilitate roadside planting operations in future.

Plantations.—This statement is blank as there are no plantations in this district.

Groves.—There is only one grove in this district extending over an area of 1·51 acres in the Háfizabad Tahsíl. No addition or reduction was made in the area under groves.

Avenues.—About 63·30 miles of new roads situated in the Khángah Dográn Tahsíl were added to the existing mileage suitable for avenues during the year 1896-97. The total length of roads suitable for avenue planting at the end of this year was as follows :—

	Miles.
Tahsíl Gujránwála	148·39
„ Wazirabad	84·90
„ Háfizabad	148·84
„ Khángah	139·00
Total	521·13

Of this 164·99 miles of road were already stocked with trees at the beginning of 1896-97, while 11·53 miles of road were planted afresh with trees, of which 1·51 miles, however, failed.

The following table shows the detail of mileage stocked with trees, area added afresh, area failed, and that remaining at the end of 1896-97 :—

Tahsíl.	Area stocked with trees at the beginning of the year.	Area added.	Area failed.	Balance.
Gujránwála	91·00	...	...	91·00
Wazirabad	30·50	1·00	...	31·50
Háfizabad	27·49	5·53	1·51	31·51
Khángah	16·00	5·00	...	21·00
Total	164·99	11·53	1·51	175·01

In 1897-98 only ·50 mile of road was planted with trees in the Wazirabad Tahsíl which increased the length of roads stocked with trees to 175·57 miles.

In 1898-99 about 1·50 miles of road were again planted with trees in the Wazirabad Tahsil and the length of roads stocked with trees at the end of the period under report thus amounted to 177·01 miles as follows:—

	Miles.
Tahsil Gujranwála	91·00
„ Wazirabad	33·50
„ Hafizabad	31·51
„ Khángah	21·00
	177·01

The seedlings transplanted chiefly consisted of *shisham* and *kikar* plants which were partly obtained from the Canal Department Nursery at Khanke and partly from other places.

The following list shows the detail of roads fully stocked with trees at the close of the period under report:—

	Miles.
1. Gujranwála-Rámnagar Road...	9·25
2. „ Hafizabad „ ...	28·42
3. „ Siálkot „ ...	6·50
4. „ Shaikhupura „ ...	15·00
5. „ Khángah „ ...	9·20
6. „ Karyál „ ...	5·00
7. „ Eminabad „ ...	9·00
8. „ Dínanagar „ ...	4·00
9. „ Vánike „ ...	7·00
10. Wazirabad and Pindi Bhattián Road	17·00
11. Dhaunkal and Grand Trunk „	1·00
12. Sohdra and Siálkot Road „	·50
13. Wazirabad-Daska „	6·00
14. Manchar-Hafizabad Road <i>via</i> Akálgarh	6·67
15. Kálaske-Chenawán Road ...	2·46
16. Ahmadnagar-Khanke „ ...	4·50
17. Kálaske-Ahmadnagar „ ...	0·50
18. Hafizabad-Vánike „ ...	7·50
19. „ and Sukheke Road ...	2·00
20. „ „ Khángah Road ...	6·00
21. „ „ Shaikhupura Road ...	1·99
22. Shaikhupura-Pindi Bhattián „	1·00
23. Hafizabad-Jalálpur „ ...	5·00
24. Khángah-Sháhkot „ ...	7·00
25. „ Ajnianwála „ ...	3·00
26. „ Pindi Bhattián „ ...	3·00
27. „ Shaikhupura „ ...	2·00
28. Hafizabad-Gajargola „ ...	2·52
29. Mananwala-Karkan „ ...	1·00
30. „ Sháhkot „ ...	1·00
31. Sángra-Sháhkot „ ...	1·00
32. Marh-Khángah „ ...	1·00
Total	177·01

In Hafizabad and Khángah-Dográn roadside trees are watered chiefly by the Chenáb Canal and where canal water is out of reach, irrigation is carried on through watermen. In the Gujranwála and Wazirabad Tahsils roadside trees are watered by watermen alone. The detail of establishment employed by the District Board of Gujranwála in each tahsil for watering roadside trees is enclosed herewith (Statement A). A few *bhistis* or watermen are also employed by the Municipal Committee to water trees on the Municipal Circular roads, but no new trees were planted by the Municipal Committee during the period under report.

Method of tree planting.—The planting operations in this district are carried on in January and February in the cold weather and in July and August in the hot weather. Seedlings from 2 to 4 feet in height are rooted out with lumps of earth and then transplanted about 3 feet apart from each other and protected by brush or thorn fencing from cattle trespass. In some places mud walls about 4 feet high are made to serve as protection for young trees. Some of the young trees on the Station roads have been provided with flat iron-bar fencing, and it is under consideration to have some more fencing of this description made out as soon as funds are available for this purpose.

Young trees are supplied with water from the Chenáb Canal and *bhistis* every second day during summer and every fifth day in winter. The trees most congenial to the soil are *kikar*, *shisham*, *sisis*, *ber*, and *faras*, but it is the three first varieties that are largely planted on roads.

Lopping.—Lopping is carried out by saws whenever required. In 1895-96 and partly 1896-97 trees greatly suffered in consequence of the prevalence of scarcity of fodder, and cattle owners frequently resorted to the practice of denuding trees of their branches and bark to make provender for their cattle.

Fruit trees.—No fruit trees of any description were planted on roads during the period under report. It is reported that mango and *jáman* trees were once experimented on in the Gujranwála Tahsíl, but the results obtained were not encouraging and the experiment was given up. There were, however, about 60 or 70 plants of Egyptian date-palm growing at the District Board Garden, but some of these have dried up, while others are 7 to 8 feet high and are likely to bear fruit.

Some varieties of American vines were also received through the Director of Land Records and Agriculture, Punjab, for experimental sowing, but none proved successful as the plants dried up.

Some varieties of imported corn seeds such as barley, wheat, oats and maize, &c., were received for experiment from the Government Agri-Horticultural Gardens, Lahore, and were distributed among the Tahsildárs of this district, but the outturn was small as compared with what it is in the original country.

Gardens.—The District Board of Gujranwála maintains 6 gardens at present, viz :—

1. Sadr Garden.
2. Sessions House Garden.
3. Garden, Tahsíl Gujranwála.
4. Ditto Háfizabad.
5. Ditto Khángah.
6. Ditto Shábkot.

The garden at the Sadr station is the largest of all the District Board Gardens in this district and covers an area of about 20 acres. Several varieties of fruit trees are cultivated in this garden, but Malta oranges form the chief source of income and its cultivation is now largely carried on both by local bodies and private owners of gardens.

The Malta oranges produced in the District Board Gardens are regarded as a speciality of this district.

The District Board Garden at Khángah Dográn is in good condition and depends for its irrigation on the Chenáb Canal. Several new fruit trees and plants were grown at the gardens during the period under report.

A large variety of flower and vegetable seeds were purchased from the Himalaya Seed Stores, Mussoorie, and Messrs. Sutton and Sons, Reading, England. The flower plants particularly, and the fruit trees generally, were affected considerably during the last cold weather.

The gardens in this district are more or less ornamental and the amount of sale-proceeds of fruit and vegetables received by the District Board is far below the cost of maintenance.

The Municipal Committee of Gujranwála maintains 4 gardens; 2 of these are merely orchards. The produce of Malta oranges forms the chief source of income here also.

The Municipal Committees of Wazirabad and Rámnagar also maintain small gardens, but very little income is derived from them.

The enclosed statement marked (B) shows the establishment entertained by the local bodies for the maintenance of gardens.

Development of arboriculture by private persons.—No private persons or village communities showed any marked interest in arboriculture, though a few gardens are maintained by private persons in this District. These gardens, however, appear to be well looked after.

Financial results.—The following table shows the income from, and expenditure on, roadside trees and gardens during the three years under report as compared with the income and outlay of the three preceding years:—

Year.	Income.	Expenditure.	Surplus.	Deficit.
	Rs.	Rs.		Rs.
1896-97	2,682	9,167	...	6,485
1897-98	2,776	9,105	...	6,329
1898-99	2,729	6,706	...	3,977
Total	8,187	24,978	...	16,791
1893-94	2,002	8,505	...	6,503
1894-95	2,480	8,896	...	6,416
1895-96	2,095	8,255	...	6,160
Total	6,577	25,656	...	19,079

The income from, and expenditure on, arboriculture and gardens are classified in the triennial statements submitted herewith.

The income chiefly consists of sale-proceeds of garden fruit and dry trees. It will be seen from the above figures that while cost of the maintenance of gardens and arboriculture has decreased, the income from these sources increased considerably during the period under report. The remarkable decrease against the year 1898-99 under "Expenditure," as stated elsewhere, was due to stoppage of regular salaries to *mális* and coolies employed for the nurseries in the colonization area, as each man received a piece of spare land for private cultivation in lieu of his services to the different nurseries. The services of roadside jamadárs in each tahsíl with those of a few *bhishtis* were dispensed with as unnecessary during the period under report, and this reduction also considerably affected the cost of maintenance of arboricultural establishment.

A large number of dead trees was sold during the year 1898-99, which accounts for the increase against arboriculture in this particular year.

General, and programme of tree-planting.—Special attention is now given to arboriculture and the sale of dead trees. Rules have been framed for the guidance of the officials concerned. The whole subject of tree-planting, &c., has been overhauled, and operations are now carried on according to a pre-arranged programme through the tahsildárs.

A map of the District showing the length of roads stocked with trees is appended to these remarks.

(A).—Detail of Establishment employed for the maintenance of roadside trees in the Gujranwála District.

No.	Name of tahsíl.	Establishment.	Annual expenditure.	Total.	REMARKS.
1	Station Road ...	1 Jamadár, at Rs. 3 per mensem 5 Bhishtís at Rs. 4-8-0 each ...	Rs. 36 270	306	
2	Tahsíl Gujranwála ...	1 Mate, at Rs. 8 per mensem ... 8 Bhishtís, at Rs. 5 each ...	96 480	576	
3	Tahsíl Wazirabad ...	2 Bhishtís, at Rs. 4 per mensem 10 " at Rs. 5 " "	96 600	696	
4	Tahsíl Háfizabad ...	1 Mate, at Rs. 8 per mensem 10 Bhishtís, at Rs. 5 " "	96 600	696	
5	Tahsíl Khángthah ...	9 Bhishtís, at Rs. 6 per mensem	648	648	
		GRAND TOTAL ...	...	2,922	

(B).—Detail of Establishment employed by the District Board, Gujranwála, for the maintenance of gardens.

No.	Garden.	Establishment.	Annual cost.	Total.	REMARKS.
1	Sadr Garden ...	1 Málí, at Rs. 10 per mensem ... 10 Coolies at Rs. 5 " " ...	Rs. 120 600	720	
2	Session House Garden ...	1 Málí, at Rs. 5 per mensem (spare) 2 Coolies, at Rs. 5 per mensem	60 120	180	
3	Tahsíl Garden, Gujranwála ...	1 Málí, at Rs. 6 per mensem ... 1 Cooly, at Rs. 4 " " ...	72 48	120	
4	Tahsíl Garden, Háfizabad ...	1 Málí, at Rs. 10 per mensem ... 1 Cooly, at Rs. 4 " " ...	120 48	168	
5	Tahsíl Garden, Khángthah ..	1 Málí, at Rs. 10 per mensem ... 2 Coolies, at Rs. 7 " " ...	120 168	288	
6	Tahsíl Garden, Sháhkot ...	1 Málí, at Rs. 5 per mensem ... 1 Cooly, at Rs. 6 " " ...	60 72	132	
		GRAND TOTAL ...	...	1,608	

*(B) Statement showing the Establishment employed by the Municipal Committees of
Wazirabad and Gujranwala for the maintenance of gardens.*

No.	Name of Garden	Establishment	Annual cost.	Total.	REMARKS.
		(A)—Under the charge of Gujranwala Municipal Committee.			
1	Sardar Mahan Singh's Garden	{ 1 Mali at Rs. 7 per mensem ... 5 Coolies at Rs. 5 " " ...	84 300	384	
2	Dispensary Garden ...	{ 1 Mali at Rs. 7 per mensem ... 1 Cooly at Rs. 5 " " ...	84 60	144	
3	School Garden ...	1 Mali at Rs. 5 per mensem ...	60	60	
		(B)—Under the charge of Wazirabad Municipal Committee.			
4	Municipal Garden ...	{ 1 Mali at Rs. 10 per mensem ... 3 Coolies at Rs. 5 " " ...	120 180	300	
		GRAND TOTAL ...	...	888	

GURGAON DISTRICT.

Rainfall.—The total rainfall during the three years under report was 46·53 against 83·11 of the preceding three years, which shows a decrease of 36·58.

Nurseries.—The area under nurseries remained the same during the three years under report as was during the last three years.

Plantation.—322·250 acres of land, out of which 70 acres was area stocked in the beginning of 1896-97, was restored to the owners during the year (1896-97) as it did not afford income to recoup the expenditure and 163·500 acres was restored in 1897-98.

Groves.—The area under groves at the beginning of 1896-97 was 285·39 acres, which remained the same till the end of the year ; but it was reduced by 3·37 during 1897-98 leaving 282·02, which was due to the thinning out and sale of trees. No change has been made in the area during 1898-99.

Avenues.—Avenues have not been extended during the three years under report principally on account of the defective rainfall.

Income.—The total income for the three years under report was Rs. 12,528 while in previous three years it was Rs. 12,974. This shows a decrease of Rs. 446. There is a decrease in income from ornamental gardens, nurseries and plantations, all of which is due to scanty rainfall. The increase in groves and avenues is mainly due to windfalls, loppings and thinning out of trees on the different roads of the district.

Expenditure.—The total expenditure for the three years under report was Rs. 11,111 against Rs. 19,850 in the three previous years. This is mainly due to a reduction in establishment on nurseries and roadside trees ; on many of the roads the trees had grown to a good size and *malis* and *bhishtis* were not required, and the general work of thinning out and lopping, &c., was carried by the *malis* instead of by paid labour. The increase in expenditure on gardens is due to the rising cost of feed of garden bullocks, purchase of seeds and stocking garden with orange trees.

The three years under report have been exceptionally bad years for arboriculture operations throughout the district on account of scanty rainfall.

AMRITSAR DISTRICT.

A.—General remarks regarding the Season.

Rainfall.—The average rainfall during the three years under report was much below the average of the past years, but though the insufficiency of the monsoons of these years does not appear to have affected the operations in arboriculture to any very material degree, the entire failure of the winter rains, especially that of 1898-99 was a source of increased expenditure in keeping alive the young stock, planted out during the monsoons.

B.—District Arboriculture.

Avenues.—The following statement exhibits the work done on avenues during the three years 1896-97 to 1898-99 :—

Year.	Length of roads fully stocked with trees at beginning of year.	Length of roads planted during the year.	Length of roads which have failed during the year.	Length of roads fully stocked with trees at end of the year.
1896-97	172.51	16.03	12.31	176.23
1897-98	176.23	11.82	11.56	176.49
1898-99	176.49	12.71	11.92	177.28

The above figures show that during the last three years 40.56 miles of roads were planted up; of these 4.77 miles succeeded, thus bringing the total length of roads stocked with trees at the end of 1898-99 up to 177.28 miles.

During the last three years the Amritsar Municipality has not made much progress in the planting of roadside avenues. The statement shows a failure of 21.64 miles and an addition of 21.93 miles.

Description of work done.—The tree planting operations carried out on roadsides are given below :—

Name of Road.	1896-97.			1897-98.			1898-99.		
	Planted.	Died.	Remaining.	Planted.	Died.	Remaining.	Planted.	Died.	Remaining.
Amritsar-Sri Hargobindpur Road ... * ...	...	...	...	75	16	39	75	14	61
Ajnāla-Rāmdās Road	...	...	...	275	25	250	175	45	130
Tarn Tarān-Hariki Road	...	...	...	...	...	...	40	10	30
Filling gaps on District Roads	3,715	3,063	652	3,602	3,360	262	4,460	3,908	552
Total	3,715	3,063	652	3,952	3,401	551	4,750	3,977	773

The above also shows the extension of planting operations on—

Amritsar-Sri Hargobindpur Road	030 miles.
Ajnāla-Rāmdās Road	109 "
Tarn Tarān-Hariki Road	009 "

The only new extension carried out by the Amritsar Municipality was the planting of 65 trees on the road from Kutchery to the Roman Catholic Chapel, a distance of 0.19 miles. 7,610 trees were planted to replace old and decayed trees or filling up gaps, of these 7,505 died, leaving a balance of 105 live trees at the end of 1898-99.

Groves.—The total area under groves at the beginning of the year 1896-97 was 3.37 acres, to this was added 33.02 acres transferred from nurseries, and 10.08 acres on account of trees on encamping grounds, serais, rest-houses, &c., not included in previous years' returns by mistake, and failures 0.10, leaving an area of 46.37 acres stocked with trees at the end of the year 1898-99.

1.75 acres of groves are entered in Amritsar Municipal return for 1898-99, this is on account of trees standing in the compound of dispensaries, schools, poor-house, &c., and not included in the returns of previous years by an oversight.

Plantations.—The plantation of old *hikar* trees of 6 acres of the Amritsar Municipal drainage channel was cut down and sold, leaving an area of one acre at end of 1898-99.

Nurseries.—The area under nurseries has diminished, a considerable part of the diminution (33.02 acres) being due to transfers under groves. During the past three years saplings of *shisham*, mango, orange, peach, apple and pomegranate trees were reared, and at the end of 1898-99 there were 5,000 *shisham*, 200 mango, 600 orange, 100 peach, 150 apple and 350 pomegranate plants in the nurseries.

During the triennial period the Municipality has sown 6·17 acres of *shisham*, *jáman*, mango and other fruit trees. Of those surviving 1,500 plants were supplied free of cost to the Cantonment authorities, 500 to Thákur Maha Chand, Extra Assistant Commissioner, 350 to Ghulám Kádir, Honorary Magistrate, 250 to Muhammadan burial ground and 1,500 to other private individuals. At the close of 1898-99 there were in the nurseries 1·46 acres of young *shisham* plants of about a foot high, 0·21 acres of mango, 0·11 acres of *jáman* and 0·21 cuttings of fruit and rose trees.

Government Gardens.—The Rámbágh Garden being so attractive for the general public is not only kept up for ornamental purposes, but also financially, and the income derived from it is steadily on the increase, and it is confidently anticipated that in time it will be self-supporting. The sale of plants, fruits and vegetables alone yielded an income of Rs. 2,680, Rs. 2,752 and Rs. 2,654, respectively, during the past three years. At the close of 1898-99 there were 2,350 plants of apricots, peaches, oranges, *aluchás* and loquats, also 500 grafted mango plants, and about 5 acres sown with vegetable. The Nicholl and Aitchison Parks are kept up by the Municipality as a pleasure resort for the public and are in a flourishing condition, the only income realized from them are for grass and fruits, viz., Rs. 2,722 and Rs. 508, respectively, during the past three years.

Cattle trespass and lopping.—About 648 buffaloes, bullocks and cows, and 1,610 sheep and goats, were sent to be impounded under the Cattle Trespass Act for injuring young plants on roadside trees during the three years under report. The Municipality also sent to the pounds 464 buffaloes, cows, &c., and 635 sheep and goats. The damage done to the young plants on roadsides by the browsing of cattle passing along the roads is one of the chief causes of failures in the avenues.

Tree-logging was carried out where necessary during winter months from December to February.

Financial results.—The income from District arboriculture amounted to Rs. 8,118 and the expenditure to Rs. 25,005, both are in excess of the previous triennial period. The former is due to the sale of a very large number of trees blown down by storms in 1897-98 and 1898-99, and the latter to the entire failure of the rains which caused an increase of expenditure.

The Municipal returns also show increases of income and expenditure of Rs. 35,386 and Rs. 64,501 against the preceding three years of Rs. 20,745 and Rs. 50,191, respectively.

Work done by private persons.—In the District fruit gardens were planted by the following persons :—

Báwa Premdás, near Fattehgarh Road.

Lál Singh, near Murádpur Village.

Míán Ghulám Kádir, Honorary Magistrate, near Siálkot Road, about 2 miles from Amritsar.

Mutsaddi, lambardár, near Siálkot Road.

Five fruit gardens were planted within Municipal limits, two by Thákur Maha Chand, Extra Assistant Commissioner, and Sardar Narendar Singh, Sub-Registrar, and the other three by zamíndárs.

Map of District.—The map of the district showing the arboriculture operation on roads accompanies.

DELHI DISTRICT.

Rainfall.—The rainfall was 22·46 inches in the year 1896-97, 23·40 inches in 1897-98 and 15·19 inches in 1898-99, as against the average rainfall of 28·08 inches. Thus it was deficient throughout the triennial period, and seriously affected arboricultural operations.

Nurseries.—The work done under nurseries is as follows :—

Period.	Area at beginning.	Additions.	Deductions.	Balance.
	Acres.	Acres.	Acres.	Acres.
1893-94 to 1895-96	1·68	0·51	1·43	0·76
1896-97 to 1898-99	0·76	0·13	0·21	0·68

There were five nurseries at the beginning of the period under report with an area of 0·76 acres. One nursery with an area of 0·21 acres was given up, a new nursery, area 0·09 acres, was formed on the old Cantonment-Azádpur Road, and one of the existing nurseries was extended by 0·04 acres. The number of nurseries was thus the same at the close of the triennial period. 4,036 young trees were removed from these nurseries and transplanted on roads, and 325 plants were sold during this period. Seeds were sown in the areas from which plants were removed, and the nurseries are stocked with plants, although in some places they have suffered owing to scanty rainfall and attacks of porcupines. There are no nurseries in the Delhi Municipality. Young plants for roadside planting are obtained from private gardens.

Plantations.—The following statement shows the operations carried out under plantations:—

				Area for plantations.	Area.			
					Stocked at beginning.	Additions.	Deductions.	Balance.
<i>Delhi Municipality.</i>								
1896-97 to 1898-99	...	...	...	938.73	938.73	...	...	938.73
<i>Delhi District.</i>								
1893-94 to 1895-96	...	...	...	1,023.15	611.77	147.49	182.87	576.39
1896-97 to 1898-99	...	...	...	917.65	576.39	5.32	20.05	561.66

There is nothing of importance to be noted about the *bela* plantation at Delhi.

In the District trees were planted in 2 acres in the Tilauri Plantation, and *kikar* seed was sown in 3.32 acres of *band* embankments. But owing to scanty rainfall the operations in two acres planted in the Tilauri *rakh* and 1.05 acres of *bands* were not successful, and a plantation at Mahrauli with an area of 17.00 acres was given up and restored to the zamindars. *Kikar* seed was not sown in the Tilauri *rakh* and on *bands* on a large scale owing to deficient rainfall.

Groves.—The area of groves in the district at the beginning of the triennial period was 16.51 acres. 0.13 acres were transferred from nurseries, and a grove in 0.07 acres was planted in the Sonapat School. But a grove planted in the Balabgarh encamping ground in 0.08 acres and a part of the grove and garden attached to Balabgarh Tahsil in 0.40 acres failed, leaving 16.23 acres at the close of the period.

The groves are in good condition. No new groves were planted in the Delhi Municipality. The grove of prickly pear on the Ridge in the Municipality in 1.50 acres is doing well.

Avenues.—The following statement shows the progress made under avenues:—

					Mileage of roads.	LENGTH OF AVENUES.			
						Stocked at beginning.	Additions.	Deductions.	Balance.
Delhi Municipality.									
1893-94 to 1895-96	...	...	...	...	38.00	25.00	...	...	25.00
1896-97 to 1898-99	...	...	...	...	38.00	25.00	...	...	25.00
Delhi District.									
1893-94 to 1895-96	...	...	...	...	337.67	151.59	46.94	47.30	151.23
1896-97 to 1898-99	...	...	...	...	349.05	151.23	49.74	39.54	161.43

No extensions of avenues were made in the Delhi Municipality. But a number of new trees was planted in the suburban wards during the three years under report and they are doing well.

In the district the result of the operations is as follows:—

								Additions.	Deductions or failures.	Balance.
<i>Tree-planting.</i>										
Delhi Tahsil	...	...	...	...	...	...	...	2.06	2.03	...
Sonapat Tahsil	...	...	...	...	...	...	...	3.13	4.81	...
Balabgarh Tahsil	...	...	...	...	...	...	...	.10	.10	...
Total	...	...	...	...	...	...	...	5.29	6.94	—1.65
<i>Seed sowing.</i>										
Delhi Tahsil	...	...	...	...	...	...	...	12.50	11.25	...
Sonapat Tahsil	...	...	...	...	...	...	...	6.00	6.00	...
Balabgarh Tahsil	...	...	...	...	...	...	...	20.45	15.35	...
Total	...	...	...	...	...	...	...	38.95	32.60	+6.35
Due to corrections of omissions	...	...	...	...	...	...	...	5.50	...	+5.50
Total	...	...	...	...	...	...	...	49.74	39.54	+10.20

Thus there is an increase of 10·20 miles in the mileage of avenues, 5·50 miles being due to corrections of omissions and errors in the statements of Local Boards and 4·70 miles to increase of avenues. The large failures under tree planting and seed sowing operations are due to scanty rainfall, and, in the Delhi tahsíl, to the destruction caused by locusts in the year 1897-98. The existing avenues are reported to be in good condition. They were looked after by the establishment of roadside trees, and gaps were filled up.

Ornamental Gardens.—There are three ornamental gardens in the Delhi Municipality. These gardens have suffered greatly for want of a regular supply of canal water which is on only for ten days during the month, and Government has been addressed on the subject. There is also a small ornamental plot attached to the Kutab Staging Bungalow.

Cattle trespass and lopping.—Lopping was carried out whenever necessary by the permanent establishment of *málís* on metalled roads. On unmetalled roads, where there are no permanent *málís*, this work was carried out by contractors or experienced coolies during the cold weather.

There are 20 cattle-pounds in this district; and 2 chawkidárs in each tahsíl; 3 chawkidárs on *bands*, a jamadár and a chawkidár on the Delhi-Najafgarh Road to protect trees from cattle trespass, &c. Four persons were prosecuted for cutting trees in the Balabgarh Tahsíl and fined Rs. 14.

Fruit and fodder trees.—The *kikar*, *pípal*, *banyan*, &c., trees, the leaves of which are eaten by cattle, grow in large numbers on the district roads and in the Tilauri Plantation. There are 641 mango and *jáman* trees on roads in addition to a number of plum trees on the Shádipur band. The mango trees on the roads in the Sonapat and Balabgarh Tahsíls are young and have not borne fruit yet.

Development of arboriculture by private persons.—No trees are reported to have been planted by private persons in the Delhi and Sonapat Tahsíls. The following operations are reported by the Balabgarh Local Board :—

1896-97.

- (1) Mango tope, in 6·25 acres at Mahrauli, by Kázi Ahmad Bakhsh of Mahrauli.
- (2) Garden, in 1 acre at Chandanhoola, by Majlas Meo—containing mangoes, *pípal*, and *gular* trees.
- (3) Garden, in 50 acres at Satbari, by Wazir, containing mango trees.
- (4) Garden, in 50 acres at Gadaipur, by Wájid, containing mango trees.

1897-98.

- (5) Grove in 1 acre at Nawada by Jhandu, containing *ním* and *kikar* trees.

1898-99.

- (6) Garden in 1 *pacca bigha* at Masjid Moth, by Chaudhri Gangan Singh, containing 18 kinds of trees.

Scheme for taking up and planting village common lands in agreement with the proprietary bodies of villages.—This scheme has not been successful. The plots of lands given by the zamindárs in 1883-84 were so poor—efflorescent in some cases, and very hard in others—that this fact alone prevented the growth of trees raised by sowing *kikar* seeds at the expense of the District Board, and, as it was impossible to continue arboricultural operations on such plots without heavy expense, the scheme was abandoned.

Plan of operations.—There is a plan of operations, but owing to the limited allotment of funds for arboricultural operations, it has not been possible to follow it strictly, and operations have hitherto been restricted to the maintenance of existing avenues, plantations and groves.

Financial results.—The following statement shows the income and expenditure during the past three years :—

							1896-97.	1897-98.	1898-99.
							Rs.	Rs.	Rs.
INCOME.									
<i>For District.</i>									
From District Funds	...	...	...	...	...	...	1,973	1,961	1,800
„ Sonapat Municipality	...	...	...	...	...	...	28	25	24
„ Faridabád Municipality	...	...	...	...	...	...	...	8	...
Total							2,001	1,994	1,824
EXPENDITURE.									
<i>For District.</i>									
From District Funds	...	...	...	...	...	...	3,421	3,366	3,429
„ Sonapat Municipality	...	...	...	...	...	...	167	121	124
„ Balabgarh Municipality	...	...	...	...	...	...	48	15	22
„ Provincial Services	...	...	...	...	...	...	210	271	248
Total							3,846	3,773	3,823
<i>From Delhi Municipality</i>									
Income	...	...	...	...	...	...	7,910	7,986	7,865
Expenditure	...	...	...	...	...	...	12,235	11,040	10,741

The income under District Funds was comparatively less owing to the income of Tilauri *rakh* being affected by famine during 1896-97, and owing to restricted sales of trees in the *rakh* and on roads during 1897-98 and 1898-99. The income of the three ornamental gardens in the Delhi Municipality suffered greatly for want of a regular supply of canal water.

The expenditure incurred during the last two years was chiefly on maintenance.

JULLUNDUR DISTRICT.

Rainfall.—The rainfall of the years 1896-97 and 1898-99 was scanty and much below the average, being 19·39 and 18·65 inches, respectively, while that of 1897-98 (23·24 inches) was sufficient though less than the average (28·03). 1896-97 was the famine year, though actual famine did not occur in this district, but the district Board in consequence of less rainfall had to employ extra *bhishtis* for watering the young trees.

Nurseries.—The area under nurseries at the commencement of the period under report was 8·96 acres, which was reduced by 2·69 acres during 1896-97 owing to the transfer of certain areas to groves (Statement IV), the trees having become too old for transplanting, thus they were excluded from this statement. But in 1898-99 1·21 acres were added making the area at the end of the year to 7·48 acres. There are now 10 nurseries in the district (3 in Jullundur, 2 in Nakodar, 2 in Phillour and 3 in Nawashahar Tahsíl), and they are sufficient for the requirements of the district. 15,404 young trees were planted on roadsides and 753 sold to people other than zamíndárs.

Besides *shisham*, *pipal* and *bohar* seedlings were also planted in the nurseries.

Plantations.—The area at the beginning of 1896-97 was 81·43 acres; 28·18 acres were added during 1897-98, making a total of 101·61 acres, which is the present area of plantations. The 28·18 acres is the land of three plantations (Kariána, Sailkiánah and Gamupind) which was washed away by the river Sutlej in 1895-96 and 1896-97, but has again been added by the river changing its course. Seeds have now been sown on this land.

5. *Groves.*—These are generally disused nurseries or groups of trees planted in Kutchery compounds, &c. The number at the beginning of the year 1896-97 was 11 with an area of 10·76 acres, 4 were added in 1896-97 and 2 in 1898-99 with an area of 3·78 and 11·99 acres, respectively, while 85 acres were entered under head "Failures" to correct an error of previous year, showing a net total of 25·68 acres at the end of the triennial period. The number of groves is 17.

Avenues.—The work was confined to filling up gaps on old lines of road. No new work was done. During 1896-97 all available money was reserved for famine relief works in case they become necessary, hence no new work was undertaken in that year. Last year and even now whatever money the Board could spare is ordered to be paid towards the expenditure in connection with the suppression of the bubonic plague. I am afraid the Board will not be able to take up any new line of road till the district is quite free from this calamity. During the last triennial period 15,404 trees were planted on roadsides by the District and Municipal Committees, of which 2,404 have died or about 16 per cent.

Gardens.—There is one ornamental garden in Jullundur "the Empress Garden." It is partly laid out with grass and partly with fruit trees, no vegetables have been sown for the last three years, in fact there is no ground where these can be sown.

There are three other small gardens in the District as detailed below. The Jullundur Tahsíl or Narain Garden, as reported on last time, has been closed. It is, however, proposed to establish a nursery in its place.—

- (1) The Nawashahar Báradari Garden. This is an old *nazúl* garden near the Tahsíl building, and is kept up by the District Board
- (2) Phillour Municipal Committee Garden. This is a small garden under the charge of the Municipal Committee. It is on lease.
- (3) Nakodar Municipal Garden. This is a small piece of land on the side of the Malisián Road planted with a few fruit trees.

Cattle trespass and lopping.—Cactus hedges and in some cases earthen *gamlús* (mud-walls) are provided for the protection of young plants, and gangs of coolies are employed in each Tahsíl for the purpose of looking after the trees, planting and watering them.

During the last three years 1,054 cattle were impounded and 20 suits instituted.

Lopping is done every year in the cold weather. Rs. 503 were realized during the past three years from the sale of loppings which was done by *naukar* coolies.

Financial results.—The following statement shows the income and expenditure during the past three years under different heads :—

Head.	INCOME.				EXPENDITURE.				Surplus.	Deficit.
	1896-97.	1897-98.	1898-99.	Total.	1896-97.	1897-98.	1898-99.	Total.		
<i>Gardens.</i>	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Jullundur Empress,	326	378	95	799	1,887	2,315	2,845	6,947	...	6,148
Narain ...	54	...	...	54	284	...	...	284	...	230
Nawashahar Bāradari	360	305	319	984	260	338	276	874	110	...
Phillour Municipal	30	30	30	90	...	...	...	...	90	...
Nakodar do. ...	...	...	...	...	47	53	68	168	...	168
Total Gardens ...	770	713	444	1,927	2,378	2,706	3,189	8,273	...	6,346
Nurseries ...	424	184	200	808	798	739	772	2,309	...	1,501
Plantations ...	827	42	35	904	60	74	60	194	710	...
Groves and avenues	3,821	2,134	3,885	9,840	4,401	3,636	3,476	11,513	...	1,673
Miscellaneous ...	49	135	19	203	...	...	...	...	203	...
Total ...	5,891	3,208	4,583	13,682	7,637	7,155	7,497	22,289	...	8,607

Gardens.—*Jullundur Empress Garden.*—The income last year was very little compared with the two preceding years, it was only Rs. 95 as compared with Rs. 326 and Rs. 378 derived, respectively, in 1896-97 and 1897-98. The reason being that in that year there were no oranges which used to bring in about Rs. 70 or Rs. 80, and the summer fruit, viz., mangoes, plum and peach, were only sold for Rs. 25, while during the current year these have been sold for Rs. 223.

The larger expenditure during 1897-98 and 1898-99 compared with that of 1896-97 was due to many improvements effected by Col. Rennick during his incumbency as Deputy Commissioner, such as putting up wire fencing on the north and south of the gardens, construction of additional sheds for bullocks, re-metalling the garden roads and purchase of three pairs of bullocks in place of those which had become too old for work.

Narain Garden.—This garden has been closed, so I need not say anything regarding its financial results.

Nawashahar Bāradari.—This is the only garden which has shown a surplus after deducting expenditure from income. There is not much variation in income, while the larger expenditure in 1897-98 compared with the other two years is due to the purchase of a pair of bullocks for Rs. 70. Phillour and Nakodar are very small gardens, the former is on lease and the latter produces no income.

Nurseries.—The larger income in 1896-97 compared with the past two years was due to the realization of Rs. 60 arrears of previous year and sale of trees for Rs. 30, and more income from sale of fruit, &c., of the Jullundur Nursery. Under expenditure the difference is very slight.

Plantations.—The larger income in 1896-97 was due to the recovery of Rs. 650 on account of the price of the trees of the plantation at Punian sold in 1895-96, and also of Rs. 171 of another plantation.

Groves and avenues.—The income under this head is always fluctuating, as it depends chiefly on the sale of dead trees in a year. The larger expenditure in 1896-97 was due to entertainment of extra *bhishtis* costing Rs. 517 in consequence of scarcity of rainfall in that year. The establishment for roadside arboriculture consists of 43 coolies at Rs. 5 per mensem each (Tahsil Nakodar 10, Nawashahar 10, Jullundur 11 and Phillour 12), there were four jamadārs on Rs. 8 each before, but from 1st April 1898 they were reduced. A proposal, however, has again come up from the Nawashahar Local Board to re-employ the jamadārs, as without them the coolies do not work regularly.

Work done by private agency.—Nothing of any note has been done by people in this district, as they generally prefer cultivation of land to plantation of gardens or groves, as the former is more profitable.

Cultivation of fruit trees.—The principal fruit tree in this district is the mango, and there are five old mango gardens at Jullundur City, Nawashahar and Alāwalpur. Some of the rich zamīndārs and pleaders who own land plant grafted mangoes also.

Map.—I inclose a map showing the arboricultural operations in this district.

LUDHIANA DISTRICT.

Rainfall.—The rainfall during the last three years as compared with that of the three previous years was scanty. The fluctuations of rainfall have been very marked during the years under report. In 1897-98 it was 22.98 inches, or very near the average of the past years, viz., 26.6 inches, but 1896-97 and 1898-99 were years of drought and scarcity, the

rainfall being only 15·83 and 14·42, respectively. In the past year (1898-99) the rainfall during the winter was very scanty, viz., 1·12 inches only.

Nurseries.—The area under nurseries has been steadily increasing. From 1·95 acres at the beginning of 1896-97 it has risen to 4·45 at the end of the year 1897-98, but at the end of the year 1898-99 it came down to 4·03. The increase of nurseries is due to the large demands of trees required for plantation on roads. At present there are 13 nurseries in the district stocked with mango, *jáman* and especially *shisham* trees for the purposes of planting and filling up gaps on roads. These trees thrive well in the district, and are useful both as shady trees, and also bring in some income from fruit. During the last three years 32·33 miles of roads have been planted with single lines of trees which are thriving well. There are at present no proposals to establish more nurseries in the district as the existing ones are considered sufficient to meet the requirements of the district. There are still about 92 miles of roads which require planting with trees. A sum of Rs. 25 was realized from the sale of young trees to non-agriculturists, and about 250 plants were given *gratis* to cultivators.

Plantations —There are in fact no plantations in the district as defined in footnote (a) of the return. There is a *rakh*, originally a nursery for *shisham* trees, which has been returned as “groves,” in which no timber is grown. In the year 1897-98 it was proposed to start a wood depôt at the head-quarters for selling timber, but the experiment proved a failure.

* *Groves* —The area reported to be under groves at the beginning of the period under report was 461·65 acres, but on enquiry on the spot it was found that only 187·45 acres were actually under groves and not 364·91 acres as was erroneously entered in the statement of previous year. The reason for this was that 177·46 acres of land occupied by *chawkis* and *serais* at Lashkari Khan, Khanna and Dehlon Garden, from which trees had been cut down and sold before leasing them out to cultivators, had not been excluded from the area under groves.

The detail of 187·45 acres is given below:—

							Acres.
Ludhiána Rakh	...	...	...	...	...	...	178·62
In Tahsil Samrála	...	...	...	...	...	...	8·12
„ Jagráon	...	...	...	...	...	...	0·71

0·25 acre was added to the area under groves during the period under report on the Samrála-Ludhiána and Ludhiána-Lalton Roads where the two nurseries at Mundian and Munsuran have been converted into groves, as the trees grown up were no longer fit for transplanting.

The area under groves at the end of the triennial period under report was 187·7 acres. The Bhatían grove, which is 197 acres, is under the control of the Forest Department, and has therefore been excluded from the return.

Avenues.—The length of roads planted with single lines of trees on either side in the district during the past three years 1896-97, 1897-98 and 1898-99 was 32·33 miles as detailed below:—

1896-97.							Miles.
Ludhiána-Ráikot Road	...	...	...	...	...	...	3
Ráikot-Machiwára „	...	...	...	...	...	...	1
Bassián-Jagráon „	...	...	...	...	...	...	2
Khanna-Kheri „	...	...	...	...	...	...	0·5
Bahlolpur-Samrála „	...	...	...	...	...	...	0·5
Kheri-Samrála „	...	...	...	...	...	...	1·0
1897-98.							
Bassián-Jagráon Road	...	...	...	...	...	...	1
Khanna-Kheri „	...	...	...	...	...	...	0·5
Samrála-Bahlolpur „	...	...	...	...	...	...	1·25
Kheri-Samrála „	...	...	...	...	...	...	1·5
Khanna-Isru „	...	...	...	...	...	...	0·75
Pakhowál-Dhaipai „	...	...	...	...	...	...	2·0
1898-99.							
Ráikot-Machiwára Road	...	...	...	...	...	...	2·33
Ludhiána-Lalton „	...	...	...	...	...	...	1
Bassián-Jagráon „	...	...	...	...	...	...	4
Kheri-Khanna „	...	...	...	...	...	...	3·5
Samrála-Bahlolpur „	...	...	...	...	...	...	2
Khanna-Isru „	...	...	...	...	...	...	0·25
Utalán Ghar Khan „	...	...	...	...	...	...	2·0
Bagli-Isru „	...	...	...	...	...	...	0·25
Pakhowál-Dhaipai „	...	...	...	...	...	...	2·0
Total	...	...	...	...	...	...	32·33

The total number of young trees planted in single lines on the above roads during the last three years were 11,789 and 12,328 young trees were also planted in place of dried ones and to fill up the existing gaps at different places.

The trees so planted are mostly *shisham*, which is the kind best suited to this district, but its growth is slow. The *kikar* grows rapidly and luxuriously on this soil, and requires only a few years to become useful both for shade, fuel and timber. The zamíndárs generally like *kikar* wood. Efforts were made to raise *kikar* trees from seeds sown in trenches along the three roads in the district, but owing to the want of rain all the plants dried up. One of the chief difficulties in raising plants is the damage done to them by cattle and goats which are let loose for grazing. Cattle found damaging trees are taken to the pounds, but it does not prove a sufficient check on the cattle-owners.

Experience has shown that the land about the Samrála tahsíl is well fitted for mango plants. Over 100 young trees were therefore planted in 1896-97 on Samrála. Bahlolpur and Samrála-Kheri Roads, while in 1897-98 about 150 were planted on the Samrála-Chawa and Samrála-Kheri Roads, about 160 on the Samrála-Machiwára road in 1898-99. About 45 of these trees planted on the Samrála-Bahlolpur Road dried up; but the rest are doing well.

Kikar, *siris* and *shisham* are best suited to planting on avenues in the district.

Whenever a tree or trees are decayed or removed, measures are taken during the ensuing rainy season or spring to plant new ones to replace them or fill up the gaps.

Under the instructions received from the Commissioner of the Division two nurseries of *pípal* trees were started at the Sadr and Kahara for planting trees in the encamping grounds of the district during the rainy season. The trees grown would be sufficient for the requirements of the encamping grounds, and will be transplanted as soon as rains set in.

Gardens.—There is no ornamental garden so called in the district, but a portion of the *rakh* is used as a flower garden. There has been no income of any sort from this garden.

At present there is only one fruit garden in Tahsíl Jagráon in charge of the District Board which is in a flourishing condition, and yields an income of about Rs. 400 a year, leaving a profit of about Rs. 160 after deducting the cost of its maintenance. This garden has become self-supporting, and the income is daily increasing. The station and the tahsíl gardens at Samrála have been leased for cultivation at Rs. 25 and Rs. 35 a year, respectively. The Bassián rest-house garden was made over with the building to the Canal Department in May 1897.

Fodder trees.—No trees are planted for fodder in this district, but leaves of certain trees are used for feeding camels and goats:—

Financial Results.—

YEARS.	Income from gardens.	Income from sale of roadside trees and loppings, &c.	Total.	Expenditure on gardens.	Expenditure on arboriculture.	Total.	Profit or loss.
	Rs.	* Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1896-97	1,331	16,590	17,921	3,198	4,352	7,550	+10,371
1897-98	614	12,161	12,775	1,372	6,887	8,259	+4,516
1898-99	595	5,729	6,324	986	5,880	6,866	—542

The increase in the income from sale of roadside trees, loppings, &c., during the years 1896-97 and 1897-98 is due to the large amount of trees standing on the berms of roads having been cut down and sold as superfluous, while no such income was derived in 1898-99.

The decrease in expenditure under the head "Garden" during the years 1897-98 and 1898-99 is due to the gardens having been leased out and the establishment having been dismissed. The small increase in the expenditure on arboriculture in 1897-98 is due to the extension of avenues, felling of trees and purchasing of *kikar* seed, and small decrease under the same head in 1898-99 is attributable to the trees not having been felled in that year.

Establishment.—A retired forester of the Forest Department was appointed on Rs. 40 from 22nd April 1897 and on Rs. 20 from 1st January 1898 a month as an experimental measure.

The following is the detail of the establishment now employed on the maintenance of existing trees and nurseries and the plantation of avenues and nurseries, the expenditure being charged to Civil Budget (part I):—

<i>Tahsil Ludhiana.</i>							
1 Málí	...	...	...	@	Rs. 7 0 0	per mensem	each.
1 Do.	...	...	...	@	" 6 8 0	"	"
11 Bhishtis	...	...	...	@	" 4 8 0	"	"
30 Do.	...	...	...	@	" 4 0 0	"	"
<i>Tahsil Samrála.</i>							
2 Mális	...	...	...	@	Rs. 6 0 0	per mensem	each.
3 Do.	...	...	...	@	" 5 0 0	"	"
40 Bhishtis	...	...	...	@	" 4 0 0	"	"
<i>Tahsil Jagráon.</i>							
7 Bhishtis	...	...	...	@	Rs. 5 0 0	per mensem	each.
3 Do.	...	...	...	@	" 4 0 0	"	"
2 Do.	...	...	...	@	" 3 0 0	"	"

The establishment has been supervised by the Presidents and Mistris of Local Boards as well as by the Forester.

RAWALPINDI DISTRICT.

Rainfall.—It will be seen from Statement No. I that of the three years under report the year 1896-97 shows the heaviest rainfall, whilst the past year was as dry as 1895-96. The average rainfall for the three years is 30·39.

Nurseries.—The area set apart for nurseries is 21·76 acres, of which 14·21 acres were stocked by the district and 1·69 acres by Municipalities.

Plantations.—No afforestation operations are in practice in this district.

Groves.—The area set apart for groves in this district is 395·58 acres, of which 360·15 acres were stocked by the District Board and 20·21 acres by Municipalities. During the year 1898-99 5 acres out of the number stocked with trees failed owing to thinning out and removal of trees in the Ráwalpindi garden and at Tali-shahán in order to effect improvements in the former and to convert the latter into a horse-fair site.

Avenues.—There are 987·97 miles of road in this district suitable for avenues. Of this length 325·83 miles have been stocked by the District Board; but during the year 1898-99 2·07 miles of avenues failed, the trees having dried and been removed for sale. It is intended to replace those which stood on suitably situated roads. Municipalities stocked 10·71 miles of roads with trees. Of this length 0·25 mile proved a failure owing to the necessity for their removal when the land is taken up for building sites.

Income.—The total income from all sources during the three years was—

	Rs.
District Board	14,905
Municipalities	6,361
Total	21,266

The District Board income shows an improvement of Rs. 1,750 on the previous three years' figures, due principally to careful management of the Park and the gardens at Hassan Abdál and Chattar.

The income of Municipalities also shows an increase of some Rs. 328, the whole of which nearly is claimed by the Ráwalpindi Municipality.

Expenditure.—The total expenditure for the period under report was—

	Rs.
District Board	10,537
Municipalities	13,670
Total	24,207

Both of the above totals show a great increase on the figures of the previous three years, due in the case of the District Board to the enlargement of the Cherrapáni nursery by the renting of more land and to heavy expenditure on the roads, fencing and vistas of the Park as well as on the Park Pavilion. The Park has been transferred to the Cantonment Committee for management—a measure which will put a stop to this drain on the resources of the District Board.

The increased expenditure from Municipal funds is attributable to a desire on the part of the Municipal Committees concerned to improve the wells and gardener's quarters and gardens in their charge.

Gardens.—The six public gardens at Ráwalpindi, Chatter, Hassan Abdál, Fateh-jang, Pindigheb and Gujar Khan continue to be maintained for the propagation of fruit trees and flowers. In addition to the Government nurseries at Chatter and Hassan Abdál, the Board maintains a nursery at Cherrapáni (Sambli) ten miles from Murree, from which young fruit trees are sold and when considered necessary distributed *gratis*.

General remarks.—I am unable to report any progress in aboricultural work for the period under report as the weather has, as a rule, been quite detrimental to any attempt at extensive tree planting. I have under consideration proposals for improving nurseries in some of the gardens such as that at Ráwalpindi with the object of stocking roadside avenues in tahsils in which the condition of soil and moisture is such as to permit of the ready propagation of timber and other trees.

IV.—FOREST DISTRICTS.

GUJRAT DISTRICT.

Rainfall.—The climatic conditions of the triennial period under report were not favourable for planting operations. The rainfall of the first two years was very deficient, and that of the third was also below the average.

The summer rains of this year were copious, but the winter rains were scanty, and greatly impeded the progress of arboriculture.

Nurseries.—The area under nurseries at the end of 1895-96 was 2.21 acres. To this area .774 acres were added during the triennial period, while .79 acres were given up owing to the large number of plants having been planted on roadsides.

Five new nurseries were formed at suitable spots during the period under report in order to supply plants for the roads. Small payments are made to zamíndárs on account of rent of land and watering trees.

A large nursery is maintained at Sadar which is well stocked with *shisham* trees. Plants are supplied to private persons from this nursery on small payments. To encourage development of arboriculture by private persons trees will be distributed free in future.

Plantations.—The area planted during the years under report was .037 acres. There is only one plantation at Sadar which is well looked after.

Groves.—The area under groves has increased from 176.82 to 186.649 acres.

Avenues.—During the past three years a good deal has been done in the extension of avenues and in filling up many gaps in some of the old avenues, whence dry and fallen trees were sold.

In column 6 of the statement of avenues is also shown the area from which dead and fallen trees were sold during the triennial period under report. Much could not be attempted in tree planting during the third year owing to a large reduction in the establishment rendered necessary by financial pressure.

It will be seen from the statement that out of a total length, 611 miles of roads suitable for avenues, no less than 414.481 miles are fully stocked with trees.

A map showing various roads on which trees exist is annexed to this report.

The Municipal Committee of Gujrát planted .66 acres of roads with trees during the triennial period under report.

Income from arboriculture.—The income from the ornamental gardens maintained by the District Board during the triennial period under report shows an increase of Rs. 311 as compared with the previous period.

The income from the sale-proceeds of roadside trees shows a considerable falling off which is due to the fact that a large number of trees were blown down by storms and sold during the past three years. The income under head 'miscellaneous' decreased by Rs. 365 as compared with the previous period. There was little income from grass on roads owing to severe drought.

The income derived from gardens and sale of trees by Municipalities shows an increase as compared with the previous period.

Expenditure.—The total expenditure on gardens maintained by the District Board amounted to Rs. 2,876 during the triennial period as compared with Rs. 3,475 in the previous period, or a decrease of Rs. 599.

The expenditure incurred by the District Board on the maintenance and extension of avenues including cost of supervision during the period under report was Rs. 10,652 as compared with Rs. 11,128 in the last three years, or a decrease of Rs. 476. The same establishment was employed for the maintenance of existing avenues and the extension of avenues. Hence the cost has not been separately shown in columns 10 and 11 of the statement.

Development of arboriculture by private persons.—Plants were distributed from Sadar nursery to private persons on nominal prices. Zamindárs are charged one anna per tree and others two annas. The total amount paid on account of prices of trees was Rs. 19. To increase the general interest in arboriculture I will order distribution of trees free of charge.

Cultivation of fruit trees.—The mango trees planted in the District Board Garden have died, as the soil is not suitable for their growth, but the orange trees are in a promising condition.

Plan of operations.—No plan of operations was prepared during the period under report.

Trees were planted on roads on which they were considered necessary. I will shortly have five years' plan of operations drawn up. The subject was apparently lost sight of owing to several causes. It will be possible now to do something on a more systematic plan, as the district is recovering from the effects of the late scarcity.

Cattle trespass and lopping.—Fences of *kikar*, *ber* and *phúlá* are ordinarily used for the protection of young plants. *Cháppá* or hedges are only found in the Bár of the Phália Tahsil. Plants not less than 6 feet high are transplanted, and the fences made are a foot or two less than the trees. The same establishment which is maintained for the watering of trees protects the plants from damage. Goat-herds and cattle found damaging trees are sent to the pound. Much damage is done by camels which are sent to the pound if caught in time.

Lopping is done under proper supervision. Before men are sent out they are given full instructions. Old hands are generally employed on this work.

Dátri is used for small branches and *kalvatri* for large branches.

GURDASPUR DISTRICT.

Rainfall.—The rainfall as registered at the Gurdáspur Sadar Station during the past three years under report amounted to 100·56 inches, as compared with 166·92 inches in the preceding triennial period. The rainfall of 1896-97 was exceptionally low.

Nurseries.—The number of nurseries has risen from 9 to 11 during the period under report, two more having been added, *viz.*, one at the Parmanand Encamping Ground and the other at the Nawakot Encamping Ground. The area under nurseries at the end of 1898-99 was 3·947 acres as compared with 3·22 acres as shown in the last triennial report. The nursery at Sadar Gurdáspur supplied the greatest number of plants for roadside plantation. The income from sale of fruit plants from these nurseries has risen from Rs. 118 to Rs. 265 during the triennial period under report. The expenditure on nurseries has been Rs. 566 as compared with Rs. 1163 during the last triennial period.

Plantations.—The area under plantation was at the end of 1898-99 25·8 acres as compared with 25·65 acres at the end of 1895-96.

Groves.—The area under groves has risen during the period under report by 7·74 acres, being at the end of 1898-99 15·897 acres as compared with 8·157 acres at the end of 1895-96.

Avenues.—At the end of 1895-96 the total length of roads stocked with trees was 466 miles. At the end of 1898-99 the length of the roads planted with trees was 489·57 miles, therefore during the three years under report 23·57 miles have been stocked with new trees.

Gardens.—The income from gardens has been Rs. 2,744 as compared with Rs. 2,789 during the last triennial period.

Income from the sale of trees.—The income from sale of roadside trees has been Rs. 17,496 during the last 3 years against Rs. 15,037 realized during the triennial period preceding it. There has been a decrease of Rs. 309 in the expenditure on plantations, groves and avenues as compared with the figures for 1893-94 to 1895-96.

Fruit trees.—During the last three years 1,019 fruit trees were obtained from the Annandale Garden, Simla, and 121 from the Agri-Horticultural Gardens, Lahore. Out of these 447 trees were planted at Bukloh, 411 in the District Board Gardens, and the rest were distributed to owners of private gardens. The trees planted at Bukloh are doing fairly well, but those planted in the plains have not been so successful, about half the number having died.

Statements No. I to VII with a map of the district showing the extent to which the roads have been stocked with trees attached herewith.

UMBALLA DISTRICT.

Rainfall Return.—The rainfall in the years 1896-97 and 1898-99 as shown in the statement was lower than the average rainfall of past years. It was a little higher in 1897-98 after a drought of over a year. The entries in this statement relate to the Sadar Station only as directed in foot-note A on the statement.

Nurseries.—The area under Nurseries at the end of 1895-96 was 2·07 acres, of which ·95 acres failed or were given up; ·18 acres were transferred to groves; and ·04 acres in Pipli (now Thánesar) Tahsíl were transferred to the Karnál District but ·72 acres were again brought under nurseries during the period under report. The total area under nurseries at the end of 1898-99 was 1·62 acres only. The drought which prevailed in the district during 1896-97 and 1897-98 accounts for the large failures.

Plantations.—The statement is blank as there is no area in the district planted with trees with the view to timber crop.

Groves.—At the end of 1895-96 an area of 18·94 acres was under "Groves." ·18 acres were transferred from nurseries, and 1·28 acres, which were omitted from previous returns, were added to groves during the period under report, but 2·15 acres failed or were given up as the trees were sold. This left an area of 18·25 acres under "Groves" at the close of 1898-99.

Avenues.—The last triennial returns showed 196·28 miles as the length of roads fully stocked with trees at the close of 1895-96. The total length of roads now stocked with trees is 154·14 miles. The decrease is 42·14 miles. It is mainly due to—

- (1) Transfer of over 26 miles of roads in the Pípli (now Thánesar) Tahsíl to the Karnál District in 1897-98; and
- (2) Large failures owing to the scarcity of rain in 1896-97 and 1897-98.

Most of the roads in the district are planted with only one row of trees on either side. Very few have two rows.

The failures during the triennial period under report were 72·09 miles as against 29·95 miles planted during the same period.

No plantations on a large scale were carried on during this period, as the establishments were reduced in the middle of 1896-97 to make funds available for famine exigencies. Only a few *malís* were kept on in each Tahsíl who were hardly sufficient to look after the existing avenues. These establishments were again restored to former strength in the middle of 1897-98.

Income.—The income under the different minor heads during the three years under report was as follows:—

Years	Gardens	Avenues.	Total.
1896-97	688	3,259	3,947
1897-98	442	2,736	3,178
1898-99	377	4,104	4,481

This shows a continuous decrease in garden receipts, the reason for the decrease being that the crops have been very poor. The only garden in the district from which any appreciable income is derived is the Station Garden at Umbálla, which alone yields over Rs. 300 a year, but the expenditure largely exceeds the income. The other gardens in the district hardly pay anything worth mention. The receipts from avenues amounted to Rs. 3,259 in 1896-97. It fell to Rs. 2,736 in 1897-98, but again it rose to Rs. 4,104 in 1898-99. The decrease in 1897-98 was made good by the increase in 1898-99.

Expenditure.—The expenditure on arboriculture during the last three years under report as compared with an income of Rs. 11,606 amounted to Rs. 10,921 as detailed below—

Years.	Gardens.	Nurseries,	Avenues.	Total.
1896-97	1,635	100	1,991	3,726
1897-98	1,613	100	1,757	3,470
1898-99	1,461	150	2,114	3,725

The expenditure on arboriculture was greatly reduced during these three years and the result so far is very satisfactory.

The Station Garden, which is the most important one, costs about Rs. 900 a year. The garden at Morni was an experimental one at first, started to make experiments of tea planting. Tea planting experiments have failed. The establishment of the garden now consists of one head *mali* on Rs. 15 and one *bhisti* on Rs. 5 per mensem. Besides these there is a garden attached to the Assistant Commissioner's Court House at Rúpar which costs

the District Board Rs. 17 per mensem and another attached to the Circuit House at Jagádhrí costing about Rs. 6 per mensem. There are no separate establishments kept up for nurseries. The *malis* employed for the maintenance of roadside trees also work on the nurseries. Similarly there are no separate establishments kept for extension of avenues. The whole establishment is classified as Roadside Trees Establishment.

The great drought in 1896-97 and 1897-98 affected the arboriculture a good deal, otherwise there was no other calamity affecting arboriculture.

The district map is enclosed for reference.

SIALKOT DISTRICT.

Rainfall.—The rainfall during 1896-97 and the following year was very scanty, during 1898-99 though the summer rain was fair the winter rains failed altogether. During the whole of this period arboriculture was carried on under great difficulties; a large number of young trees perished from drought.

Nurseries.—The area under Nurseries has risen from 6.79 acres at the close of 1895-96 to 9.18 acres at the close of 1898-99. During the period under review new nurseries were established, mostly in small plots, on various roads, where tree planting operations were in progress, whilst some of the old ones were abandoned or transferred to "Groves".

Plantations.—There has been no change in the area under "Plantations." The trees planted by the Siálkot Municipality near the Aik are in a flourishing condition.

Groves.—The area under "Groves" is much the same as it was in 1895-96. There has been a slight decrease of .49 of an acre which is due to "failures."

Avenues on roadsides.—At the close of 1895-96 out of a total length of 838.50 miles of roads in the district, 541.74 miles were stocked with trees. During the period under report avenues on roadsides were extended by 34.38 miles whilst trees in 1.25 miles failed, leaving a length of 574.87 miles of avenues fully planted at the close of 1898-99. There are of course small gaps here and there in all these miles which will be gradually filled up. Besides this, on various roads several miles of inner or second lines of trees have been planted, this work is indicated in the map by red dots along the green lines. Gaps have also been filled up in many places in old avenues.

Bands and Canal banks.—The fruit and fodder trees planted on *bands* and banks of irrigation channels in past years are in excellent condition. On the Satrah *band* embankment the mango trees have already begun to yield a return for the expenditure on them.

Species of trees planted.—On roadsides the species of trees planted consist chiefly of *sisu*, *kikar*, mulberry, with here and there mango, *Cassia fistula*, *Terminalia* and *jáman*. Care is taken to plant such trees as are found to be suitable for the various kinds of soil. The planting of *bakain* as well as *ber* and *siris*, though valuable as fodder trees, is discouraged, as being unsuitable for avenues and liable to destruction by goat-herds. The most valuable trees are the *shisham* and *babúl* as they yield splendid timber for all domestic and agricultural purposes.

Experimental cultivation, American Vine.—A few years ago some cuttings received from the gardens at Simla were put down in the District Board Gardens which have grown into fine plants and are now producing fruit of fairly good quality, though of small size. The fruit ripens much later than the country varieties. A few cuttings of vines from Quetta were also obtained and are doing well.

Egyptian Date.—The Egyptian date-palms raised from seed received some years ago from the Director of Land Records and Agriculture and distributed in the district are doing well, except in some places where they were apparently neglected. The plants in the gardens, on the fort plateau and on the Satrah and Arki *band* embankments, have grown into fine trees and many of them have borne excellent fruit.

Inga Dulcis.—A small quantity of seed of this plant received from the Director of Land Records was sown last March and has germinated well. When large enough the plants will be put down in the gardens and elsewhere.

Destruction of trees by storms, floods, &c.—No unusual damage was done to full grown trees by storms or floods, but owing to deficient rainfall many young plants died. In the gardens, however, fruit trees suffered much from drought, and the hot winds scorched most of the fruit, whilst the dry frost during winter killed many trees.

Income from Arboriculture.—The average income from arboriculture during the past three years was good, being Rs. 24,800 per annum, as compared with Rs. 24,704 in the previous triennial period.

Expenditure.—The average annual expenditure on the maintenance of ornamental gardens, nurseries, groves and avenues during the period under review was Rs. 15,021 against Rs. 12,504 in the preceding three years. This is due to the appointment of Superintendents of Arboriculture in 1896-97 and to increased watering establishment that had to be maintained during these years of drought.

Establishments.—The arboricultural operations are divided into two parts, *e. g.*, (1) The maintenance of nurseries and groves and the planting and preservation of roadside avenues, (2) The collection and sale of dead trees and loppings. The former is under the supervision of the Tahsildárs, whilst the latter is under the direct management of the Local and District Boards. The supervising establishment consists of three Superintendents amongst whom the five Tahsils are distributed, these men are responsible for supervising all arboricultural operations and for conducting the sales of trees. Under them in each Tahsil is a *jamádár* who looks over the work of the *bhishtís* and *malís*. To each Tahsil there is a *chaprasi* attached who is employed to collect the sale-proceeds of trees and to assist generally.

Work done by private persons and village communities.—The people are fully alive to the necessity of tree planting. Small private orchards continue to be planted in various parts of the district as a source of profit. In every village may be seen one or more plantations or groves of timber trees, chiefly *shisham*, *kikar*, mulberry or *bakain*, the last supplies the people with roofing timber not liable to destruction by white ants. There has been much improvement of late years in the cultivation of European vegetables, the "Arains" who are first class market gardeners prefer imported seed of the squash, turnips, carrots, cauliflower and cabbage. Potatoes is extensively and profitably cultivated in this district, seed being procured from Dehra Dún, Naini Tal and other places.

HOSHIARPUR DISTRICT.

Rainfall.—The rainfall for the three years under report is noted below :—

1896-97	...	...	...	...	...	...	...	...	25.77
1897-98	...	...	...	...	...	...	...	...	21.81
1898-99	...	...	...	...	...	...	...	...	38.63

The rainfall was below the average during the years 1896-97 and 1897-98; while it was more than the average fall in 1898-99. The summer rain was specially less during the two preceding years. It, however, exceeded the average rainfall in 1898-99. The winter rains were favorable in all the years. It will appear that the rainfall of 1898-99 improved the position of the district, and more than sixteen miles of road were planted with trees.

Nurseries.—The total area of nurseries is now 9.48 acres. Of this area, 3.50 acres were added during 1898-99, the rainfall of which was favorable to arboriculture; the previous area under nurseries being 5.98 acres. Nine of the existing nurseries were extended and 34 newly established chiefly for the growth of fodder trees, *pípal* and *kikar*. In 1896-97 and 1897-98 no new plants were put in owing to the deficient rainfall, the work being chiefly confined to the maintenance of existing plants in nurseries.

These nurseries are established in different places of all the Tahsils in this district; most of them being situated on the sides of roads. They supply trees for filling up gaps caused by the removal of dead and fallen trees. The existing nurseries are still insufficient to the requirements of the district.

Groves.—There was no addition to the area under Groves, nor has it diminished in these three years 1896-97, 1897-98 and 1898-99.

The *langra* and *báramási* mango plants, which were obtained from Benares in 1895-96, after having been distributed to the well-to-do zamíndárs are now standing in the Station Garden Nursery at Hoshiarpur. They are in good condition and their grafts when ready will be sold to zamíndárs. The demand for Malda and Bombay mangoes, orange grafts, loquats and peaches, is still unabated.

Avenues.—The length of roads planted out with trees during the three years 1896-97, 1897-98 and 1898-99 under report was 23 miles, a detail of which according to roads is given below :—

1896-97.

Tahsil Dasúah.

- (1). Hájipur-Tilwára Road 2 miles.

Tahsil Garhshankar.

- (2). Garhshankar-Santokhgarh Road 2 miles = 4

1897-98.

Tahsil Garhshankar.

- (1). Garhshankar-Santokhgarh Road 1 mile.

Tahsil Unah.

- (2). Nurpur-Bhadighat Road 1½ miles = 2½

1898-99.

Tahsil Dasúah.

- (1). Miani-Kolian Road 5 miles.
(2). Hájipur-Mansara 5 „

Tahsil Garhshankar.

- (3). Garhshankar-Santokhgarh Road 3 miles.

Tahsil Unah.

- (4). Núrpur-Bhadighât Road 3½ = 16½ = 23 miles.

Proposal for planting out trees.—The proposal made to plant out trees in 72·66 miles of roads in the last triennial report was not fully carried out owing to the unfavorable rainfall of the subsequent three years. The completion of the remaining part of the proposal will be undertaken during the next three years, if the rainfall permits of it.

Establishment for arboriculture separated from road repairing establishment in Tahsil Dasúah as an experimental measure.—The establishment for rearing roadside trees has been separated from the road-repairing establishment in Tahsil Dasúah since January 1899 as an experimental measure. If this measure which is being tried for the furtherance of arboriculture succeeds well, it will be extended to the other Tahsils of the district. A monthly report of the work done is submitted by the Tahsildár of dasúah; any defects found in it are pointed out, and instructions given from time to time are carried out by the arboriculture jamadár, who has been specially appointed to supervise the work of 24 mális entertained for the purpose of planting, watering and tending trees on the sides of roads. By this scheme gaps found will also be filled up and valuable trees will be reared.

Trees planted out on roadsides.—The number and description of trees planted out during the three years under report are stated here :—

	1896-97.	1897-98.	1898-98.	Total.
Shisham	2,958	1,942	2,798	7,698
Jáman	296	258	532	1,086
Mango	906	690	744	2,340
Pípal	1,717	1,092	19,136	21,945
Eucalyptus	95	45	122	262
Mulberry	484	352	809	1,645
Kíkar	1,152	922	1,033	3,107
Phuláha	534	449	819	1,802
Beri	15	11	25	51
Siris	15	13	40	68
Arjan	3	8	35	46
Symbol (cotton)	12	4	21	37
Tún	140	43	195	378
Total	8,327	5,829	26,309	40,465

The income derived from the sale of trees, dead and fallen, amounts to—

In 1896-97	Rs. 5,665
„ 1897-98	„ 5,160
„ 1898-99	„ 6,787
Total	„ 17,612

This amount includes Miscellaneous Receipts, a detail of which is given here :—

	1896-97.	1897-98.	1898-99.	Total.
Fruits	215	195	457	867
Kharkana grass	355	250	221	826
Grass	125	115	121	361
Lac	497	435	670	1,602
Loppings of trees	825	535	144	1,504
Petty receipts	32	16	...	48
Total	2,049	1,546	1,613	5,208

Rules for pruning and clearing out avenues.—The following general rules are in force in regard to the lopping of trees :—

- I.—A height of 10 feet over the whole breadth of the road formation should be kept clear from obstruction.
- II.—No branch of a mature tree should be allowed to project over the road brim within this height. Further, to ensure that the trees grow straight and regularly, the side away from the road will be similarly trimmed to the same height.
- III.—Care must be taken that the pruning of young trees is not carried out so as to injure the growth of the trees.
- IV.—The annual pruning and clearing away of branches should be undertaken during the months of November, December and January, but branches which materially interfere with traffic should be removed with as little delay as possible without waiting for the annual clearance.
- V.—Thick branches are required to be removed by means of a saw and small branches with the *dātri* or scythe with teeth.

EXPERIMENTAL CULTIVATION.

Murram grass roots.—The *murram* grass roots are still being annually supplied by Government for experiment. They have been sown in different places. On the *Oho band* at Jehan Khelan in Tahsíl Hoshiárpur it grew well for a time but in places it has dried up.

The roots of this grass planted near wells and tanks in Tahsíl Dasúah are doing well. In Tahsíl Garhshankar they were planted in a garden, and they are still green there, but it appears that the roots sown elsewhere have dried up.

From the details given above there seems no doubt that this grass thrives well if carefully looked after and adequately watered. Without sufficient moisture the *murram* grass roots can hardly be expected to thrive anywhere.

The roots are generally received in a dry condition from Australia, and as they nowhere received enough moisture, no other result can be expected.

Eucalyptus.—No experiment has been made in these three years under report with any kind of *Eucalyptus*. These trees which are growing at different places are in good condition. Some of the young plants of *Eucalyptus* taken from the Station Garden Nursery have been put in on the sides of Station Roads at Hoshiárpur, and they are doing well.

Acacia Melanoxylan.—18 seers of seed of *Acacia Melanoxylan* were obtained from the Assistant Conservator of Forests, Naini Tál Division, in August 1896. 15 seers were sown in the Station Garden and 3 seers in the Hoshiárpur Tahsíl Garden. In the former 400 plants and in the latter 150 plants have grown. For their distribution, the Tahsildárs were asked to report, and it appears from their reports that zamíndárs do not like to have them.

American maize.—In March 1897 the Director of Land Records supplied acclimatised seeds of three varieties of American maize, white field, yellow field and smedley. Each of the varieties was separately sown in different *localities by selected cultivators*. The seeds germinated, but owing to scanty rainfall the plants did not thrive. The yield was therefore much less than the ordinary maize produced in this district.

It was proposed that if a fresh supply of seeds be received, they will be sown in good soil, sufficiently manured and irrigated. In March 1899 the Director of Land Records ordered a supply of the different varieties of American corn, but the Superintendent of the Agri-Horticultural Gardens, Lahore, sent them to Kángra through a mistake.

Fruit trees, peaches, pears and plums.—Under an arrangement made by the Director of Land Records, fruit trees, peaches, pears and plums were obtained in 1897-98 and 1898-99 from the Annandale Gardens at Simla. They were distributed to such of the zamíndárs as take an interest in them. In the Station Garden there are 14 peach, 4 pear and 5 plum trees standing, and they are in good condition.

Inga Dulcis Memossea.—In December 1898 the Director of Land Records supplied seeds of *Inga Dulcis Memossea* for cultivation, inasmuch as they form excellent hedge, their fruits furnish nourishing food and their annual cuttings make valuable fuel. They have been made over, for experiment, to a retired Extra Conservator of Forests. The result of this experiment will be apparent in October next.

Cattle trespass and loppings.—There are great obstacles in the way of rearing roadside plants. Cattle and goats damage them if not properly protected. A cactus fence is the most effective fence for preventing such damages. It is lasting and economical in the long run. As saplings of 4 and 5 feet high are planted out on roadsides, the fences are made 5 feet high. Open brickwork and wire netting are no doubt good for fences but they are expensive. Mud walls are not lasting as they tumble down in the rains. Fences of dry thorns or branches of trees are used where cactus is not procurable.

The branches of trees are lopped off with a hand-saw and small branches with the *dátri* or scythe with teeth as has already been stated.

Fodder trees.—Great attention is paid to the planting out of *pípal* trees and their cuttings and *kíkar* trees, as they afford considerable fodder to cattle, especially in times of scarcity. The number planted out during the three years is as follows :—

Pípal ...	{	In 1896-97	...	...	1,717	
		" 1897-98	...	...	1,092	
		" 1898-99	...	...	19,136	
						= 21,945 against 2,632 in 3 previous years.
Kíkar ...	{	" 1896-97	...	...	1,152	
		" 1897-98	...	...	922	
		" 1898-99	...	...	1,033	
						= 3,107 do. 351 do.

In times of fodder scarcity, the leaves of these trees will yield a large revenue to the District Board. Evidently with this object in view and to afford ready assistance to zamíndárs to feed their cattle when fodder is scarce, these trees have been reared. The *kíkar* trees do not give sufficient shade to travellers, and therefore do not make a good avenue; but they have been planted together with other shade trees and the result is fairly satisfactory.

Encroachments on roadside trees.—These encroachments have of late increased, as roadside trees having grown up have become valuable property. Those people who have fields and gardens adjoining to roads have commenced to make every effort to take possession of trees close to their lands. Trees when young were cared for by them, but as they are now full grown trees suitable for building purpose and their value has increased, every opportunity is taken by owners of adjoining lands to get them. They even go so far as to sue the District Board and have their right proved by law suits. Several such cases have occurred this year.

Income and Expenditure.—The following table shows the income, expenditure and profit or loss accruing from arboriculture during the present triennial years as compared with the previous triennial years :—

YEARS.	INCOME			EXPENDITURE			Profit or loss.
	From gardens.	From sale of roadside trees.	Total.	On gardens.	On arboriculture.	Total.	
1896-97, 1897-98 and 1898-99 ...	2,275	15,337	17,612	3,539	23,570	27,109	-9,497
1893-94, 1894-95 and 1895-96 ...	2,692	14,881	17,573	3,695	20,873	24,568	-6,995

From the above comparison it will appear that during these triennial years there has been a decrease of Rs. 417 in the garden receipts. The sale of roadside trees, however, show an increase of Rs. 456. The rainfall was less in two out of the three years under report. The garden produce was consequently less, and it yielded less income. On the other hand, the sale of dead trees due to want of moisture has fetched more income.

The expenditure on account of gardens has slightly decreased in these triennial years, the decrease being only Rs. 156. This is due to the effect of reduction of garden establishments caused in 1895-96. The expenditure on arboriculture has increased from Rs. 20,873 in the previous three yearly period to Rs. 23,570 in the present period; the increase being Rs. 2,697. This is due to the revision of establishment charges effected in July 1895 having been in full force during these triennial years.

	Arboriculture.	Rs. a. p.
1 Jamadar	...	7 8 0 p.m.
24 Malis at Rs. 4-8-0 each	...	108 0 0
	Road Repairs.	
3 Jamadars at Rs. 7 each	...	21 0 0
57 Beldars at Rs. 5 each	...	285 0 0
Total	...	421 8 0
Against the monthly charge of	...	435 8 0
Savings	...	14 0 0

The new arrangement of separate establishment for arboriculture and for road repairs introduced since January 1899 in Tahsil Dasuah tentatively, has effected a monthly saving of Rs. 14 as shown on the margin; but it is too premature to pronounce an opinion on it.

Arboriculture and Road Establishments.—A detail of the establishment employed on the maintenance of trees and nurseries and plantation of new avenues and nurseries is stated below, the expenditure being charged half to the Civil Budget and half to the Public Works Grants:—

Arboriculture Establishment and Contingent Charges.

For the year 1896-97	...	...	...	...	...	...	...	...	...	Rs. 7,955
Do. 1897-98	...	...	...	...	...	...	...	...	...	„ 8,763

For the last triennial year 1898-99, a detail is given here:—

Of Tahsil Hoshiarpur.

				Rs.	Rs.	Rs.
6 Jamadars	@ Rs. 7-0-0 each	= 42	per mensem × 12	= 504		
4 Malis	@ „ 5-0-0 „	= 20	„ × 12	= 240		
54 Mali Beldars	@ „ 4-8-0 „	= 243	„ × 12	= 2,916	= 3,660	
Deduct charges debited to P. W. grant for road repair	...	...	...	1,718		
					1,942	
Add—Contingencies	...	...	...	...	144	
						= 2,086

Of Tahsil Dasuah.

1 Jamadār	@ Rs. 7-8-0	= 7-8-0 per mensem	× 12 =	90	
9 Jamadārs	@ „ 7-0-0 each	= 63-0-0 „	× 12 =	756	
1 Māli	@ „ 5-0-0 „	= 5-0-0 „	× 12 =	60	
80 Māli Beldārs	@ „ 4-8-0 „	= 360-0-0 „	× 12 =	4,320	= 5,226
Deduct charges debited to P. W. grant for road repair	...	...	...	2,644	
				<u>2,582</u>	
Add—Contingencies	...	...	...	...	142
				<u> </u>	= 2,724

Of Tahsil Garhshankar.

1 Jamadār	@ Rs. 8-0-0	= 8-0-0 per mensem	× 12	= 96	
8 Jamadārs	@ „ 7-0-0 each	= 56-0-0 „	× 12	= 672	
72 Mālī Beldārs	@ „ 4-8-0 „	= 324-0-0 „	× 12	= 3,888	= 4,656
Deduct charges debited to P. W. grant for road repair	...	...	...	...	2,486
					<u>2,170</u>
Add—Contingencies	...	...	...	...	164
					<u>2,334</u>

Of Tahsil Unah.

1 Jamadār	@ Rs. 8-0-0	= 8-0-0 per mensem	× 12 =	96	
21 Mālīs	@ „ 4-0-0 each	= 84-0-0 „	× 12 =	1,008	
1 Mālī	@ „ 1-0-0 „	= 1-0-0 „	× 12 =	12	= 1,116
Deduct charges debited to P. W. grant for road repair	...	...	...	443	
				673	
Add—Contingencies	...	...	...	35	
					= 708 = 7,852

Garden Establishment.—The establishment employed on gardens is detailed here:—

Garden Establishment and Contingent Charges.

For the year 1896-97	...	...	...	...	...	...	...	...	...	Rs. 1,136
Do. 1897-98	...	...	...	...	...	...	...	...	...	„ 1,316

For the last triennial year 1898-99, a detail is here given:—

Of Sadar Gardens.

				Rs.	Rs.	Rs.	Rs.
1 Head Mali	@ Rs. 8-0-0	= 8-0-0 per mensem × 12	= 96				
7 Malis	@ „ 5-0-0 each	= 35-0-0 „ × 12	= 420				
2 Do.	@ „ 2-8-0 „	= 5-0-0 „ × 12	= 60				
							= 576

Of Tahsil Gardens.

3 Malis	@ Rs. 4-0-0 each	= 12-0-0 per mensem × 12	= 144				
							= 144
							= 720
Add—Contingencies	...	...	...	...	...	...	367 = 1,087

The establishment of the Sadar Station Gardens is under the immediate supervision of a member of the District Board and under the general control of the President of the District Board. The Tahsil Gardens are supervised by the Presidents of the Local Boards.

Map of the District submitted before with the two previous triennial reports is again submitted, marking out the roads planted with young trees during the triennial period under report with four dotted red ink lines.

SIMLA.

Rainfall.—In Simla itself the rainfall during the triennial period under report was below the accepted average of past years, and was considerably less than that registered during the preceding three years.

At Kasauli, however, the amount recorded was, in all, somewhat in excess of the "average of past years."

On the whole the rainfall over the tract was deficient than otherwise.

Nurseries.—The total area under nurseries, viz., 8 acres, has remained unchanged. These nurseries are in the care of the Superintendent of the Annandale Gardens under the Municipality of Simla. Mostly fruit trees are grown in them for distribution and sale. The total number of fruit trees distributed through the Deputy Commissioner was 3,733. The greater number of these were distributed free through the Náib-Tahsildárs of Simla and Kotkhai to zamindárs who take an interest in fruit culture. Some being also given at 2 annas each, to European house owners residing in Simla who possess gardens, take a special interest in the raising of fruit trees, and ask for an allotment of new plants.

Plantations.—The area under plantations, viz., 57.5 acres, has remained the same. The whole of it is under the Superintendent of the Annandale Gardens. In 1897 the Assistant Commissioner at Kasauli reported as follows:—

"The hill near the Sappers and Miners" spring was covered by young deodar plantations which are doing well. Many other places in different portions of the cantonment were improved by cypress plants by the Regimental Authorities."

However no area is shown in the return as specially "taken up" for the purpose. In this way no doubt a good deal of tree planting is done which does not appear in the annual returns, for these refer, it is presumed, to *plantations* in the proper sense of the word.

Groves.—There are no roadside public groves in Simla Proper; but at Kálka there is one of which any account is taken in the encamping ground there, 13.62 acres in extent. As Kálka has during the current year been transferred to the Umbállá District, even this small area will no longer appear in the returns of this district.

Avenues.—Planted avenues there are next to none in Simla. Owing to the hilly nature of the district it is generally impossible to plant considerable lines of trees. At Kasauli, however, small *chil* trees were planted in 1898 on the side of the Mall 2½ miles in length. The only other planted avenue shown in the District Returns is that at Kálka measuring 2.66 miles; it will next year appear in the returns of the Umbállá District.

Income and Expenditure.—The total income and expenditure during the years 1896-97 to 1898-99 has been Rs. 38,488 and Rs. 27,617, respectively, giving a surplus of Rs. 10,871. This compares favourably with the surplus of only Rs. 5,127 in the preceding triennial period. Below in tabular form is compared the income and expenditure of the present period with that of the past:—

Income.

Year.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1893-96	32,066	1,330	10,190	...	4,020	47,606
1896-99	21,879	1,263	12,307	457	2,582	38,488

Expenditure.

YEAR.	WORKS.								ESTABLISHMENT.	TOTAL.
	Ornamental gardens.		Nurseries.		Plantations and afforestations.		Groves and avenues.			
	Maintenance and repairs of existing groves.	Extension ^c of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestations.	Extension of plantations and afforestations.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1893-96	18,366	...	2,202	500	6,323	350	157	...	14,581	42,479
1896-99	11,731	...	7,601	...	5,818	...	...	...	9,808	27,617

HAZARA DISTRICT.

Rainfall.—The following table shows the rainfall of the district in each of the past three years :—

1896-97	...	...	...	...	...	...	...	...	39.10
1897-98	...	...	...	...	...	...	...	...	47.16
1898-99	...	...	...	...	...	...	...	...	42.88
Average	...	...	...	...	...	...	...	...	43.04

The average fall during the past three years was 43.04, against an average of 44.84 as the record of past years. It was not only insufficient but unseasonable for arboricultural purposes.

Nurseries.—There are 9 nurseries in the district under the charge of District Board and Municipal Committees. They are well looked after, and provide a large number of young trees suitable for planting on roadsides, public and private tanks and wells; Civil and Sarban *rakhs*.

About 500 young trees were distributed amongst zamindars for private plantations from the District Board Nursery at Abbottabad; and 200 young trees of different varieties were supplied for plantation on the Military *rakh* at Abbottabad free of cost, during the triennial period under report. 800 young trees were transplanted on the Civil and Sarban *rakhs*.

The area under nurseries is about the same as reported in previous years, *i.e.*, about 15.3875 acres.

Plantations.—The area under plantation was neither added to nor diminished during the period under report. The young trees planted on the Sarban and Civil *rakhs* were much damaged for want of timely rainfall.

Groves.—No new groves were planted during the last three years, those existing are doing well.

Avenues.—A few miles of the District and Municipal roads were planted with young trees, but the result was very poor; nearly the whole of the plantings failed.

Experimental cultivation.—Some seed of edible chestnut was received from the Director of Land Records and sown in the public garden, Abbottabad, in November 1897. The seed germinated and result was reported in October 1898.

Some seed of sugarbeets was sown at Abbottabad but the result was not satisfactory.

About 2½ lbs. of *Inga dulcis* seed was supplied by the Director of Land Records for experiment in this district. A few seeds have germinated, and the result will be reported October next.

Cultivation of fruit trees.—The people of the district are very fond of planting fruit gardens, especially in the Haripur Tahsil they are supplied every year with the fruit trees out of the annual supply received from the Mahasu Orchards.

The following fruit trees were received from the Annandale Gardens, Simla, during the three years under report:—

Trees.	1896-97.	1897-98.	1898-99.	Total.
Apples	300	300	50	650
Pears	200	200	120	520
Apricots	50	25	25	100
Cherries	50	200	...	250
Peaches	50	...	200	250
Plums (Japan)	10	...	25	35
Total	660	725	420	1,805

The trees are young and have not fruited yet. They were distributed as follows and are thriving:—

European Residents of Abbottabad	83
Jagirdárs and Landlords	140
Abbottabad Public Gardens	447
Haripur Nazul Gardens	555
Chittigáti Gardens	145
Mansehra „	340
Tahsil Compound, Mansehra	27
Do., Abbottabad	20
Manager, Agror Estate	48
Total	1,805

The Public Garden at Abbottabad and the nazul Gardens at Haripur are doing very well.

Income.—The income under the different minor heads during the three years was—

District Funds.

	Rs.
1896-97	170
1897-98	530
1898-99	176

Municipal Funds.

	Rs.
1896-97	2,633
1897-98	3,117
1898-99	2,459

The large increase in 1897-98 in the income of District and Municipal Funds include Rs. 407 and Rs. 316 on account of sale-proceeds of trees and branches of trees sold at Abbottabad. The income of Municipal Gardens has improved considerably since the last triennial period.

Expenditure.—The following is a detail of the fixed arboricultural establishment maintained during the past three years:—

District Fund.

	Rs.
1 Máli @ Rs. 6 per mensem on Abbottabad District Board Nursery, 72 per annum.	
1 „ @ „ 7 „ on Sarban Rakh	84
2 Mális @ Rs. 6 each per mensem on Civil Rakh	144
1 Mali @ Rs. 6 per mensem on Dhobighát Road	72
1 „ @ „ 6 „ on Mansehra Nursery	72
1 „ @ „ 6 „ on Chittigáti Nursery	72

The expenditure on arboriculture under the District Board is always greater than the income. One *máli* on the Dhobighât Road and one on the Civil *rakh* were reduced from April 1897 and October 1898, respectively :—

MUNICIPAL FUNDS.

Haripur.

	Rs.
1 Jamadár Máli @ Rs. 15 per mensem	180 per annum.
1 Assitant „ @ „ 7 „	84 „
2 Mális @ Rs. 6 each per mensem	144 „
6 „ @ „ 5 „ „	360 „

The expenditure on arboriculture under the Haripur Municipality has also been reduced from 1st April 1899, which will be reported in the next triennial report :—

Abbottabad.

	Rs.
1 Jamadár Máli @ Rs. 15 per mensem	180 per annum.
1 Assistant „ @ „ 7 „	84 „
5 Mális @ Rs. 6 each per mensem	360 „
1 Chowkidar Sessions House @ Rs. 2 per mensem	24 „

The progress in arboriculture (chiefly fruit trees) in the Municipalities of Abbottabad and Haripur is considerably improved since the last report. The want of funds in the District Board makes it very difficult to further improvements in the district. The planting of trees along the district roads (which are mostly situated in hilly tracts) is unnecessary.

In the few roads which are in the plain the planting of trees has been found to be impossible on account of scarcity of water, viz., Khanpur Road, &c.

KANGRA DISTRICT.

Rainfall.—The entries relate to Sadar Station only, and can give no correct idea of the rainfall of the district generally. The fall was less during the triennial period under report than in the preceding one.

Nurseries.—During this triennial period the area occupied by the nurseries was reduced to 2·376 acres from 3·525 acres which was at the close of 1895-96. The cause of decrease will be explained under head “Expenditure.”

Plantations.—There are no such plantations in the district as defined in foot-note (a) of the return, i.e., area planted with trees with the intention of producing a timber crop without reference to the development of particular trees.

Groves.—The groves in the Kangra Dispensary and Patwárhána and Tahsíl Compounds as well as the Kutchery Gardens were maintained in fair condition.

As regards the grove on the Nárpur Dák Bungalow Hill the expenditure was limited during the period under notice to the maintaining of the fencing round it. The trees already planted are doing well, and the brushwood is increasing. The area of 6 acres, which was added to the Tahsíl Garden at Pálapur in 1895-96, has now become a regular garden, and the fruit trees planted in it are coming on fairly well.

Avenues.—During the period under report the length of roads which failed by drought or the rocky nature of the soil, or trees which were uprooted by high winds, was 24 miles leaving decimal fractions, while the area planted with trees either to fill up gaps on the old roads or on new lines amounted to 28 miles, hence the real work done was 4 miles as compared with 50 miles in the previous triennial period. The decrease will be noticed further on under “Expenditure.”

Income.—The income during the time under report amounted to Rs. 2,140, or Rs. 11 less than the years 1893-94 to 1895-96. The decrease is small and calls for no remark.

Expenditure.—The expenditure was Rs. 5,591 as compared with Rs. 9,031 in the previous triennial period. The decrease of Rs. 3,440 is explained below :—

Rs. 310 were spent on the maintenance of the existing nurseries in 1893-94.

Rs. 313 were laid out in the same year on the extension of groves. The outlay incurred on the supervising staff was Rs. 504 as against Rs. 756 during 1893-94 to 1895-96.

The amount paid in 1893-94 to 1895-96 on account of maintenance of existing groves and avenues was Rs. 5,326 as compared with Rs. 2,702 during the period under report. As stated in the last report the expenditure was restricted to the maintenance of existing trees and to growing trees in those tracts only where it is possible to grow them. Permanent gangs of coolies who used to plant out trees everywhere without regard to the state of the road or the possibility of tending the trees were paid off and small establishments on certain main roads were entertained with instruction to concentrate their efforts.

Preparation of new plans of arboriculture.—After the expiry of the five year programme it was not considered necessary to make a new one.

The distribution of fruit plants amongst villagers, &c.—2,411 fruit trees were supplied from the Mahásu Orchard at Simla as compared with 1,845 during the preceding triennial period. The distribution of the fruit plants received during 1897-98 and 1896-97 amounted to 1,586. During 1898-99 the following trees were supplied from Simla through the Director of Land Records and Agriculture:—

Apples	...	...	...	...	...	...	...	...	50
Apricots	...	...	...	...	...	...	...	...	25
Cherries	...	...	...	...	...	...	...	...	20
Peaches	...	...	...	...	...	...	...	...	400
Pears	...	...	...	...	...	...	...	...	280
Plums	...	...	...	...	...	...	...	...	50
Total	...	...	...	...	...	...	...	...	825

The fruit trees were distributed to the owners of gardens at Dharmśāla, and sent for distribution to the professional growers and owners of gardens at Tahsils Palampur, Kángra, Dera and Núrpur.

The cherry is not successful anywhere. The cause is not known. The apple does better. The most successful are peaches and plums for which the demands invariably exceed the supply. The pears succeed better in Kulu Valley than Kángra.

Chestnuts have been an entire failure.

In Kulu the fruit culture has already become a profession. During the previous triennial period the distribution of fruit trees was restricted to Kángra and Pálampur Tahsils only, but during the period under report plants were supplied to the other Tahsils also.

On the whole the result of fruit culture has been good though it will be some time before very practical results are obtained.

A map of the District showing the arboricultural operations will be sent later on.

CANAL DIVISIONS.

1ST DIVISION, BARI DOAB CANAL.

District Gurdáspur.—The only operations worth notice during the period under report are :—

- I.—Replanting two acres with *kikar* trees on the right bank of the canal above Sirkián bridge.
- II.—Replanting $14\frac{1}{2}$ acres on the left bank of Dháriwál Kaler reach with mango, *jaman* and *shisham* trees.
- III.—About $3\frac{1}{2}$ miles of avenues have been added, and a mile out of it failed.

The plantations and the avenues are doing well.

The total expenditure in this District for the past three years amounted to Rs. 5,494, and the total income Rs. 17,429, showing a profit of Rs. 11,935.

Amritsar District.—The following new plantations, measuring an area of 101·21 acres, were established in this District :—

1.	Kasúr Branch, Sanjeh	...	...	...	18·5	acres.	} 101·21 acres.
2.	Sobráon „ Fatehabad	...	...	...	4·0	„	
3.	„ Diláwalpur	...	...	...	37·0	„	
4.	„ Bahádarpur	...	...	...	20·0	„	

These are all in a healthy condition and are mostly *shisham* and mango. A length of 11·5 miles has been added to the avenues.

The total expenditure has been Rs. 7,578 and the income Rs. 4,207, showing a loss of Rs. 3,371, which is due to Rs. 4,162 having been spent in the extension of new plantations.

Lahore District.—No new plantations and avenues have been added in this District. The expenditure has been Rs. 184 and the income Rs. 914, showing a profit of Rs. 730. On the whole the results are satisfactory, the total expenditure of the Division for the period under review amounts to Rs. 13,256 and the income Rs. 22,550, showing a profit of Rs. 9,294.

2ND DIVISION, BARI DOAB CANAL.

Plantations.—During the past three years the area planted out has been a four-acre plot at Majjupur on the Lahore Branch; beyond this nothing extra has been done. The total area at the end of 1896-97 was 1,437·06 acres and that now existing is 1,441·06 acres.

Avenues.—The total length of avenues at the close of the last triennial period was 103·06 miles, which is what it is now. There are a few gaps in places, and these are being refilled. The principal trees are *shisham* and *kikar*, and also a number of mulberry trees.

Income and expenditure.—The total expenditure during the past three years was Rs. 6,553 as against Rs. 7,017 during the previous triennial period. The income was Rs. 40,301 as against Rs. 20,227 for the previous three years. In the income for 1896-97 and 1897-98 the proceeds of sales of grazing leases on the canal has been included; this has not however been done during the year 1898-99.

3RD DIVISION, BARI DOAB CANAL.

Nurseries.—During the year 1898-99 an area of 0·60 acres was brought under nurseries in the villages of Mir Muhammad, Bhomba, Handal and Pattoki, and an expenditure of Rs. 121 was incurred.

Plantations.—The area sown during the triennial period was 138·95 acres of plantations; of this 53·60 acres failed and 3·44 acres came under silting operations. The expenditure on maintenance and repairs of existing plantations and afforestation amounted to Rs. 365 and for extensions to Rs. 4,467, making a total expenditure of Rs. 4,832. The income from this head for the same period amounted to Rs. 11,698.

Avenues and groves.—In the past three years a length of 6·4 miles of avenues was planted; of this a length of 5·0 miles were gaps filled in 1898-99, from B. M. 3·44 to 3·94, and a length of 3 miles failed within the three years.

The expenditure under Maintenance and Repairs of existing avenues amounted to Rs. 337 and for extensions to Rs. 120, making a total expenditure of Rs. 457 against an income of Rs. 7,072.

Establishment.—The expenditure on general supervision of establishment, including office establishment, amounts to Rs. 485.

The total expenditure for the whole triennial period on all heads amounted to Rs. 6,055, against an income of Rs. 18,170.

UPPER SUTLEJ DIVISION, INUNDATION CANALS.

Rainfall.—No statement for the Division has been prepared and submitted with the report—(vide instructions received with Superintending Engineer's No. 2227, dated 21st December 1892).

Nurseries.—A few have been started in 1897-98 at some canal bungalows in Mamoki Sub-Division; the one at Nijabat is thriving exceptionally well.

Plantations.—The only plantations on these canals are in chauki compounds, which were maintained and improved upon during these three years. No special tending and watering required. Couple of eucalyptus trees planted at Nijabat in 1898-99 are growing well. The large *shisham* trees at Hussain Khanwala and Lola Bungalow promise to yield very good timber in time. An area of 1.05 acres at Dobli and 1.50 acres at Bunga Sahibeka were taken up for the purpose. The plants are growing well.

Groves.—There are hardly any groves worthy of the name in the Division.

Avenues.—Lines of trees were planted in 1898-99 on Chunián Rājbaḥa, but most of them failed for want of water. Some attempts have been made to plant avenues along the banks of canals and distributaries near the bungalows. The trees are all *shisham*, but are very young yet, only a few being above 3 feet in height.

Income.—The income is derived principally from sale of fallen and dead trees, also of branches of trees, as well as from sale of grass on banks of channels for grazing purposes and from *munj* and *sarkanda* reeds which grow up spontaneously.

The income of three years under report is given below :—

								Rs.
1896-97	...	...	...	...	...	...	...	8,712
1897-98	...	...	...	...	...	...	...	3,767
1898-99	...	...	...	...	...	...	...	4,305
							Total	16,784
							Average	5,595

The average income of the three years comes to Rs. 5,595 against Rs. 7,751 compared with the average of previous three years ending with 1895-96. The decrease is due to a large amount of wood being used for Government purpose, such as manufacture of charcoal and sawing timber, for which it was issued at a lower rate than would have been obtained by selling in the market.

Expenditure.—The average expenditure during the three years under report stood at Rs. 4,424 against Rs. 3,187 in previous three years ending 1895-96. The excess due to an expenditure incurred on planting out lime trees on certain distributaries, the balance is for usual watching and tending plantation in chauki compounds.

A large number of trees were cut and used for charcoal manufacture, and making *kurries* and planks, and some were cut from water's edge and sold to contractor; this decreased the number of trees by 18,000 nearly.

An index map of plantation and avenues in the Division is attached herewith.

MOOLTAN CANALS DIVISION.

Sidhnai Canal Series.—This is the fourth triennial Arboriculture Report since the inception of arboricultural operations on the Sidhnai Canal.

At the close of the last three years' period, viz., March 1896, the following were the areas of nurseries and plantations and length of avenues on the Sidhnai Canal :—

Nurseries	...	...	...	...	...	...	...	13.27 acres.
Plantations	...	...	...	...	...	...	...	46.61 „
Avenues	...	...	...	...	...	...	...	48.49 miles.

and at the end of the present three years' period the following are the areas and lengths :—

Nurseries	...	...	...	...	...	...	...	7.27 acres.
Plantations	...	...	...	...	...	...	...	52.61 „
Avenues	...	...	...	...	...	...	...	72.75 miles.

At the head of the Sidhnai Canal an experiment was made of transplanting partially from *siris* trees. The experiment consisted of pruning off all the branches and then planting out in pits 4 feet deep and 3 feet diameter *leaped* inside with cow dung and mud and filled with water; 42 trees were so treated. The hot winds in April and the want of water at that time killed off most of the trees, leaving alive only two trees close to the head of the canal. Had there been water in the canal during whole of April, May and June there is no reason to suppose that the experiment would have been other than successful. There are about 200

miles of canal and distributaries suitable for avenues on the Sidhnai Canal, so that about one-third of this total length has been successfully dealt with. Twenty-six miles of avenues failed during the three years' period under review due to want of water at the time the trees required it. The decrease under nurseries is due to the fact that 2·5 acres were planted out and 3·5 acres of over-grown trees which could not be planted out were transferred to plantations.

The expenditure for the three years under report was—

										Rs.
1896-97	...	...	...	...	...	...	...	...	...	4,743
1897-98	...	...	...	...	...	...	...	...	...	2,791
1898-99	...	...	...	...	...	...	...	...	...	6,832

The heavy expenditure during the year 1898-99 is due to the making of a masonry water-course along the left banks of Sidhnai Canal, the expenditure on which at the end of the year amounted to Rs. 3,928-8-1.

There is also great difficulty in some years, as for example 1898-99, in getting water at the time required. During 1898-99, the River Rávi, from which the Sidhnai takes off, was bone dry from 1st April 1898 to 23rd April 1898, 5th May 1898 to 8th July 1898, and from 23rd October 1898 to end of the year.

Income for the last three years is as below :—

										Rs.
1896-97	...	...	...	...	...	...	...	...	...	115
1897-98	...	...	...	...	...	...	...	...	...	191
1898-99	...	...	...	...	...	...	...	...	...	244

The income is chiefly due to sale of firewood. Formerly the *sarkána* grass along the canal banks provided an income under the head of plantation, but the grass has been systematically removed with a decided gain in the efficiency and appearance of the canal. What is badly wanted on the Sidhnai Canal are more nurseries from which trees can be readily obtained for planting out, and it is hoped that the defect will be remedied during the next three years' period.

Chenab Canal system.—Nurseries for plantations and avenues are maintained at the Ilampur, Billiwála, Shujabad, Qasba, Mubárikpur and Buch Inspection-houses and at *baldárs'* huts wherever it has been found possible to keep up a plantation.

The Ilampur and Shujabad gardens have been fully stocked with avenues. Since last report was written wells have been provided at Qasba and Mubárikpur. The only Inspection-house in the Sub-Division unprovided with a well is Binda Sargana, and here water is obtained when canal (Matti Thal) is not in flow from a well belonging to *zamindárs*.

The following statement compares the results for the previous three years with the three years' period under report :—

									Three years' period ending 1895-96.	Three years' period ending 1898-99.
Nurseries	...	...	...	...	...	...	...	...	3·46 acres.	3·47 acres.
Plantations	...	...	...	...	...	...	...	...	51·00 „	55·84 „
Avenues	...	...	...	...	...	...	...	...	200·46 miles.	204·52 miles.

This shows that Arboriculture operations on the Chenáb Canals are on the whole satisfactory.

The expenditure for the last three years under report is given below :—

										Rs.
1896-97	...	...	...	...	...	...	...	...	...	1,053
1897-98	...	...	...	...	...	...	...	...	...	1,585
1898-99	...	...	...	...	...	...	...	...	...	1,928

which compared with the receipts for the same years is very low. The income being—

1896-97	...	...	...	...	...	...	...	...	...	3,663
1897-98	...	...	...	...	...	...	...	...	...	9,949
1898-99	...	...	...	...	...	...	...	...	...	10,883

This is due to sale of trees along the canal banks which are likely to fall in and do damage and to the sale of trees on old disused canals and to the sale of *sarkána* grass on canal banks.

SUTLEJ INDEPENDENT SUB-DIVISION.

Report.—This is the first Arboricultural Triennial Report of this independent Sub-division, the sub-division having been detached from the Mooltan Canals Division in March 1897. The plantations on these canals are not valuable ones, as there is great scarcity of water. The rest-house compounds, which constitute the area under plantations, are mostly not commanded by the canals except in the high flood season, that is to say, for about two months in the year; and very few of them have wells of their own; the plantations therefore have to be kept up on very limited supplies of water obtained from zamindárs' wells. The trees found to do well are *siris* and *kikar*, *shisham* has, however, also been largely planted and *farash* comes up of its own accord.

The avenues are almost all self-grown ; and consist of a dense mass of trees growing all over the high banks of the canals. A considerable income is got by selling such trees as are likely to fall into the canal, and also by sale of loppings. A few avenues have been specially laid out and watered at bridges and regulators with a view to affording shade for travellers and also to form land-marks ; these trees are, generally speaking, particularly fine and have been well cared for.

The expenditure on arboriculture for the last three years as compared with the receipts is given in the following table :—

Year.										Income.	Expenditure.
										Rs.	Rs.
1896-97	...	...	...	...	...	...	...	...	...	3,107	1,977
1897-98	...	...	...	...	...	...	...	...	...	3,421	1,886
1898-99	...	...	...	...	...	...	...	...	...	2,881	2,079

DERA GHAZI KHAN DIVISION, INDUS CANALS.

Nurseries.—There were no nurseries in the Division prior to 1896-97, owing to the fact that planting operations had been discontinued. In 1896 an area of 3.25 acres was planted with date-palms and is now included under this head.

Plantations.—Four *chaukis* were originally included in this sub-head, comprising 20·68 acres: of this area 2·0 failed in 1897-98, while in 1898-99 1·51 written off, and 2·80 lost by being acquired for Dera Ghazi Khan Protective Works. The balance at the end of the triennial period is 14·37 acres.

Avenues.—There was a loss of 7·05 miles of line trees along embankments in the Division, due to encroachments of the Indus.

The net result of the operations in this Division are—

1. An addition of 3.25 acres to nurseries.
2. A loss of 6.31 acres under plantations and of 7.05 miles under avenues.

There is in short no progress to show for the period under review.

Financial results.—The income during the three years (mainly from sale of loppings for fodder and of timber) was Rs. 10,859, while the expenditure has been Rs. 4,174, giving the handsome surplus of Rs. 6,685; this represents 150 per cent. on expenditure.

The income during 1897-98 was abnormal owing to heavy erosion on the Indus, which necessitated the removal and sale of standing trees on threatened reaches of canals.

MUZAFFARGARH CANALS DIVISION.

Rainfall.—The following statement shows the quinquennial average of rainfall registered at the Muzaffargarh station in comparison to each of the three years under report. The first year of the triennial period had curiously the minimum and the second the maximum of the rainfall recorded during the last 12 years. The fall in 1898-99 was below the average:—

Year.	Average of the past 5 years.	Year under report.
1896-97	5.89	1.23
1897-98	6.07	9.20
1898-99	6.19	3.30

With the exception of 1897-98 the rainfall of the other two years was too small to have any beneficial effect on the young trees growing in this arid district on canal banks and flood embankments, which depend mostly for their supply upon canal-irrigation and the height of subsoil water.

Nurseries.—The area under head nurseries existing at Betwarián and on the Walliwah at end of the year 1895-96 was transferred to plantation in 1896-97, on the trees becoming fully grown, and no additions were made in the two succeeding years for want of funds.

Plantations.—Plantations exist in the compounds of all the canal bungalows and shelter-huts, and generally consist of mangoes, oranges, pomegranates and other fruit trees. Among the bungalows, the plantations at Kinjar, Rangpur, Shujra, Jatoi and Betwarián are in a flourishing condition. The plantation at Karáriwala, which consisted mostly of *shisham* trees, was thinned in 1897-98, as the trees were too close for a vigorous healthy growth. Of the shelter-huts, the plantation at Kalu, which has a good many mango and other fruit trees, and the one at Wasendewala, which was destroyed by the flood of 1893-94 and is now re-stocked with fruit trees, are in a thriving condition. The plantation started in Executive Engineer's bungalow compound at Muzaffargarh in 1896-97 is in a promising condition.

The increase in area under this head in comparison to 1895-96 is due either to transfers from nurseries or omissions and errors adjusted, and includes only 1·8 acres of extension of a plantation in Executive Engineer's office and bungalow compound at Muzaffargarh.

Avenues.—There has been no increase in avenues for want of funds.

Expenditure.—The expenditure on arboriculture includes the cost of maintaining *malis* for tending the trees and bullocks for working wells to water them, also the cost of seeds and other petty charges requisite for their upkeep. The increase in 1897-98 in expenditure is partly due to starting a new plantation at Muzaffargarh and the figures are below normal in 1898-99.

Income.—The income derived from plantation chiefly consists of the sale proceeds of trees, died or blown down by storm, or felled in widening a channel, as well as sale of fruit from plantations in chauki compounds.

KARNAL DIVISION, WESTERN JUMNA CANAL.

Rainfall.—The rainfall for the three years has been below the average. The first year was the driest, the second year was better, and the third year a mean of the two preceding years.

Nurseries.—Allowing for 0·27 acres of nurseries transferred to Jhind Division during 1898-99, about 2 acres of nurseries have been transplanted annually, as the seedlings have grown up. At the end of the triennial period there were 2·67 acres coming on against 4·09 acres to start with.

Plantations.—There has been a slight increase in the area of plantations in the three years under review in this Division, but this is due to the transfer of 60·26 acres from the Delhi Division. The area of failure is chiefly on the Sirsa Branch, where the drought of summer is felt most during the rotational *tatils* of the branch.

Arrangements are in progress for watering the Indri chauki compound by means of an airmotor and lift pump. The Kaul chauki has failed completely in spite of all efforts, owing to bad soil.

The Sirsa Branch plantations have been thinned with great advantage to the selected trees left standing.

The eucalyptus plantations at Munak and Jani have been most successful.

The *kikar* plantations along the Dhanaura escape have been written back from Sirsa Branch to main line. They are in good condition, and only need a little thinning to give the best trees a chance of growing large and strong.

Avenues.—At the end of 1898-99 there were 223·87 miles of avenues as against 299·99 miles at the beginning of 1896-97. This difference is due partly to errors in previous returns and also to a transfer of 39·5 miles to Jhind Division during 1898-99. Efforts have chiefly been directed towards filling out gaps in existing avenues and in further extension in suitable localities.

On the new main line 2 miles near Munak have been successful. But on the Sirsa Branch distributaries generally the success has not been great, owing to the plants suffering from drought during the alternate flow and dry periods of the branch.

Financial Results.—The income derived from plantations during the three years is nearly Rs. 7,000, or the same practically as obtained in the previous triennial period. Many of the plantations are still young and are non-productive at present. The chief sources of income are from fruit gardens and grazing lands and from the older parts of the canal from timber and fuel trees.

The expenditure incurred was less than in the previous three years. The normal expenditure is Rs. 5,000 per year, which will become productive in due course.

DELHI DIVISION, WESTERN JUMNA CANAL.

Rainfall.—Over the greater part of the Division the rainfall during the three years under report was abnormally small, and this period was consequently less favourable than usual for arboriculture operations.

Nurseries.—These are indispensable wherever avenues or gardens are to be made. Plants for avenues on main canal were all taken from the nursery at mile 68 at Hydrapur during the first two years under report. This nursery was thinned out during 1898-99 under orders of Chief Engineer, conveyed in his inspection report. Some of the plots sown at Kakroi and Serespur during 1896-97 and the nurseries added during 1897-98 at miles 64 and 65 and at Bowana Bridge and other places on the main canal failed owing to scanty rainfall. The plot sown at Gungatoli garden, where canal water is available, has succeeded, and the *shisham* and mango plants are flourishing. A plot of ground along the main canal near Serespur has been prepared and fenced in during 1898-99 and a nursery will be started here during 1899-1900.

Plantations.—A reach about 50 feet wide from 11,000 to 13,000 left of new Delhi Branch was sown with *kikar* seeds two years ago, and is now covered by a thick growth of healthy young trees. From 19,000 to 23,000 right the *kikar* trees, which were damaged by fire or frost from time to time have been replaced by grown trees and are in flourishing state. The scattered patches of good soil between 6,000 and 14,000 have been sown successfully with *kikar* seed.

Another reach 70 feet wide between 40,000 and 45,000 left of the Delhi Canal has been fenced in during 1898-99 and will be sown next year when the rains begin.

The 2 acres which were sown with *kikar* seed at Jua Lock and 3.5 on Jatola Branch during 1896-97 and the *kikar* and *shisham* seeds sown on the banks of New Delhi Branch between miles 30 to 46 and 50 to 52 all failed owing to short rainfall. The plantation in the Jua Chauki compound is flourishing. Much damage is done yearly by fires starting in the jungle which have been worse than usual owing to large numbers of cattle being driven towards the canal through scarcity of fodder elsewhere.

Groves.—This head has been abolished on canal under instructions from Chief Engineer conveyed in his Circular No. 75-5451, dated 28th December 1891.

Avenues.—Generally speaking there has been no special extension under this head during the years under report. Old nurseries are, however, in flourishing condition.

Income and Expenditure.—During the three years the receipts have increased at a greater rate than the expenditure. It is hoped that as the sale of fuel in Delhi at market rates is properly regulated, and full credit is given to arboriculture for canal fuel used for brick and lime burning the balance will be on the credit side, as the main canal is becoming better stocked year by year.

 HISSAR DIVISION, WESTERN JUMNA CANAL.

Rainfall.—After a series of drougthy years till the rains of 1897 there was very good rainfall seasonably distributed, as to locality and as to time. The rainy season extended up to October 1897 and the fall for the period was well above the normal. But 1898 was a bad year for nurseries and plantations owing to scanty rainfall; and failures resulted as shown in the detailed statement.

Nurseries.—Rakhi on Hansi Branch. The *jāman* trees for which this site was the nursery have been transplanted into line trees, and the nursery has now been transferred to groves. Nurseries were established during 1898 at Rajthal, Thurau, Hansi, and Satrod. Rajthal did not succeed owing to the drougthy season and long canal closures, and Thurana was only a partial success. Rajthal is improving now, both as a grove due to trees from Rakhi and as an ornamental garden. Water storage tanks have either been made or are in progress of construction at all nursery and plantation sites, and these will tend to diminish the danger of destruction by drought owing to scanty rainfall and long canal closures.

Plantations.—The reservoirs in Narwana and Sirsa Sub-Divisions are the chief plantation depots. They have been very successful on the whole and the *kikar* forests in them are flourishing and will soon yield good material for fuel and fencing and staking. The failure of 112.4 acres in Sirsa Sub-Division in 1898-99 refers to area of spoil banks sown with *kikar*. This germinated but died down owing to drought.

Avenues.—The *shisham* avenue along the Sirsa Branch, left bank, in the Narwana Sub-Division, is in a very flourishing condition.

Extension, however, along the Sirsa Branch has been poor. In 1897-98 all expenditure on extension was stopped owing to the famine.

Two nurseries at suitable sites are just being established, one in Narwana and one in Sirsa Sub-Division, and it is hoped that great progress in avenues will result within the next triennial period.

Hansi Branch—four miles along the new channel have been planted out successfully.

Income.—Total for the period.

					Rs.	A.	P.
Narwána Sub-Division	...	...	...	...	479	0	0
Hissár Sub-Division	...	...	...	...	7,436	8	1
Executive	...	...	...	...	6,714	7	6
Total	...	...	...	...	14,679	15	7

As compared with Rs. 14,799 during the last triennial period, a remarkably close result.

FIROZPUR DIVISION, SIRHIND CANAL.

Rainfall.—The rainfall during the triennial period, 1st April to 30th September, has been much below the average except in 1898-99, when it was only 2 inch less than the average; while the rainfall during the period from 1st October to 31st March has been nearly equal to the average in 1896-97, and over the average in 1897-98; practically nothing (0·52 inch) in 1898-99.

The total average annual rainfall of former years being 18·05 inches the average for the three years under report has been 10·85 inches. The period has been one of scanty rainfall.

Nurseries.—At the beginning of the period the area under nurseries was 2·43 acres; a portion of this has been transplanted leaving 1·70 acres at the end of the period under report.

Plantations.—The area under plantation at the beginning of the triennial period was 2,275·97 acres. At the close of that period it was 2,458·47 acres, an increase of 182·50 acres. Of this 62·85 acres were added during the first year, and 27·54 acres during the second year, and 93·53 acres during the third year, while 1·42 acres have failed. There are several vacant spaces remaining to be filled. Arrangements have been made for planting these systematically so far as funds are available for the purpose. The plantation consists principally of *kikar* and *shisham* trees with some fruit plantation in or near the Inspection houses (where they can be protected from theft); all the trees are growing well. It is reported that in a period of such scanty rainfall, the *shisham* trees which have been grown with canal water require occasionally watering even after they have become fairly large trees. This fact was, it is believed, also discovered by Forest Department in the "Carob Plantation" in Lahore, the officer in charge of which once told undersigned, who was there responsible for watering it, that if the trees did not get canal water by a certain date they would die. This is a great inconvenience and any suggestion for growing these trees on this canal in such a way as to make them independent of canal water after three years would be useful. A fire which occurred in 1898-99 in the Abohar Reservoir indicated that the fire lines which are 25 feet wide are not wide enough. These will be increased to 50 feet. The fire was caused by carelessness on the part of a person, who had bought right of cutting *sarkanda* grass, and did not do much damage to the trees.

Groves.—There are no groves.

Avenues.—The length of canal avenues was 159·43 miles at the beginning of the period, and 195·43 at the end of the period, a length of 36 miles having been added during the period. It has been found that operation of forming of avenues, when carried out by itself is a very expensive one compared with the formation of plantation, and that avenues can best be formed at the same time that the neighbouring area is planted, avenues will in future be extended *pari passu* with plantation.

Income.—The average annual income by triennial periods has been as follows :—

					Rs.
1889-90 to 1892-93	...	...	...	...	2,602
1893-94 to 1895-96	...	...	...	...	3,243
1896-97 to 1898-99	...	...	...	...	4,203

The trees are young, and the population is scanty. The demand for canal produce is not great. When the trees have grown sufficiently to warrant any large area being deforested and replanted, there will doubtless be a keener demand, and fair prices will probably be realized. The Southern Punjab Railway runs close to part of the plantation, and should be of some use in helping to dispose of timber. The large plantations called the Bhatinda Reservoir and the Abohar Reservoir are both near railway stations.

Expenditure.—The average annual expenditure by triennial periods has been as follows :—

					Rs.
1889-90 to 1892-93	...	...	...	...	11,987
1893-94 to 1895-96	...	...	...	...	10,005
1896-97 to 1898-99	...	...	...	...	10,302

The amount spent on plantation is dependent on the funds available. There is still a considerable area of land not yet planted but suitable for plantation. Form III shows that out of 4,117.68 acres available land only 2,458.47 acres has been regularly planted to the end of the period. A portion of the remaining land is covered with natural growth, which affords shade and has a pleasant appearance. The remainder has no trees on it. It is very desirable that this should be planted as early as possible, an increase in the annual expenditure for a few years (even though not accompanied by an immediate increase in income) would be profitable in the end.

LUDHIANA DIVISION, SIRHIND CANAL.

Rainfall.—The average rainfall for the period under review is compared with that of the previous triennial period in the table given below :—

Station.										1893-96.	1896-99.
Rupar	...	...	...	...	...	...	...	...	...	36.05	28.14
Ludhiána	...	...	...	...	...	...	...	...	...	29.30	19.75

The period under review has been a drier one than the previous triennial period.

Nurseries.—During the period 1896-99 a greater area was planted, and on account of rainfall being in deficit there were more failures than in the previous triennial period.

Plantations.—During the three years 1896-99 a greater area was planted than during the previous triennial period, and there were less failures on account of the trees having attained a fair height and arrangements made for watering the trees by pipes.

Groves.—There are none in the Division.

Avenues.—During the present triennial period a smaller area was planted, and there was a greater increase of failures, probably due to the scanty rainfall.

Income.—During the present triennial period there is a decrease of about Rs. 1,000 as compared with the previous triennial period; the decrease is due to the smaller sale of fuel, also to the decrease in bids for grazing leases.

Expenditure.—During the three years 1896-99 there is an increase of expenditure of about Rs. 3,000 as compared with the previous triennial period, the increase is due to the maintenance and repairs to existing plantations and extension of avenues.

PATIALA DIVISION, SIRHIND CANAL.

Rainfall.—For the last three years the rainfall has been rather small and not well distributed.

Nurseries.—Avenues have been fixed along the greater portion of the canal banks and now there is not the same necessity for maintaining nurseries at many places.

At canal chaukies the *mális* will continue to grow fruit trees.

In future seed will be sown direct in favourable lengths alongside the canal, where water can be readily supplied.

A line of trees of *shísham*, *tun* or *nim* will be sown at the outer toe of the banks and will be lopped and made more shapely as line trees.

Lengths, say, about a mile long, will be fenced in and sown in this way and no nurseries will be maintained.

Plantations.—Fair progress had been made during the three years, but all the most favourable lengths alongside the canal banks have now been stocked.

The only extensions that can be carried out are where the silting up of outside borrow pits has been completed and silt tanks levelled off.

Up to date *kíkar* has been mostly sown for fuel. There is, however, no demand for fuel, and if left on the canal bank long it soon gets stolen and destroyed. In future *shísham* will be sown in preference to *kíkar* as being more valuable.

Avenues.—On the Kotla Branch and 1st Feeder good progress has been made. In future avenues and plantations will be carried on conjointly as explained above.

Income.—This is on the increase as shown below :—

									Rs.
Three years ending	1892-93	...	...	...	...	...	...	...	14,651
Do.	do. 1895-96	...	...	...	...	...	...	...	9,691
Do.	do. 1898-99	...	...	...	...	...	...	...	16,873

Expenditure.—This is higher than it was during the previous three years. The figures for the three years are as follows :—

									Rs.
1896-97	...	...	...	...	...	...	...	...	6,872
1897-98	...	...	...	...	...	...	...	...	8,276
1898-99	...	...	...	...	...	...	...	...	10,070

The current year's estimates have been cut down, so that the figures for 1899-1900 will be much below those of last year.

Date-palms.—The date-palms throughout the Division are doing well. Those near the tail of the Kotla Branch are beginning to give fruit.

CHENAB CANAL CIRCLE.

1st Division.—The triennial period under report being one of exceptionally scanty rainfall, and the plantations in the Division being wholly dependent on rain, the operations were not as successful as they might otherwise have been.

The canal avenues were extended by a length of 13 miles, and a further area of 250 acres of spoil was sown.

There has been a fair increase in the number of trees over 1 foot in girth. The decrease under *kikar* is due to the demand for fuel for the engines employed for the works in this Division. The income has averaged Rs. 1,034 per annum for the period concerned as compared with Rs. 344, the corresponding figure for the previous triennial period. The average expenditure was Rs. 6,803 against Rs. 3,720 for the three years ending 1895-96.

2nd Division.—This Division is favourably circumstanced as regards irrigation, and is not dependent, like the 1st, on rainfall.

The increase in avenues is :—

Gujránwála District	...	...	...	...	...	...	9.2 miles.
Jhang	...	...	...	...	...	...	11.6 "

The additional avenues in the former District are on the Mián Ali Branch ; in the latter, on the Rakh Branch, the Dijkot Distributary, and in the Civil Station of Lyallpur. Lyallpur is now fully stocked with trees in a very flourishing condition.

The increase in the areas under plantations is as follows :—

Gujránwála District	...	...	...	...	...	62.88 acres.
Jhang	...	...	...	...	...	139.65 "

The existing plantations in the Kotla, Marh, and Sarfattu Reservoirs were extended ; extensions were also made in the rest-house compounds of the Mián Ali and Rakh Branches and at Lyallpur ; and the completed silting tanks at Sangla were sown. All plantations are doing exceedingly well.

The general growth of the trees both in plantations and avenues has now so far advanced as to admit of a large number being classified. There are as yet, however, no trees of over 3 feet girth. All trees are still dependent on irrigation on account of the dry and arid climate. The plantations are still too young to bring in a return.

3rd Division.—This Division, comprising the Lower Gugera and Buralla Branches, is one which has been purely a constructive one. Work was not sufficiently advanced to enable any plantations to be taken in hand until the last year of the triennial period in question. During 1898-99 portions of certain rest-house compounds were sown with *shisham* on the trench system, and the operations were very fairly successful. On the spoil banks a considerable area was sown, in drills with *kikar*. These sowings almost entirely failed owing to the drought, and the impossibility of giving canal water to the ground. The boundary roads along certain lengths of the Lower Gugera and Buralla branches were sown in avenues with *shisham*. The seed generally germinated well, but subsequently there were extensive failures due to poor soil and damage by cattle and goats.

The large expenditure incurred on both avenues and plantations was due to the excavation of the trenches.

4th Division.—The Jhang Branch Upper in this Division was first opened for irrigation in the cold weather of 1896-97. Up to that time plantation work had mainly consisted in making nurseries in rest-house compounds and sowing trees on spoil. The nurseries have now been used up, and the trees planted in the compounds and in avenues close by. All compounds are now well stocked with trees. The spoil sowings were mostly failures.

In avenues, 20 miles in the Gujránwála District and 189 miles in the Jhang, have been sown. The trees sown are mainly *shisham*, but to a less extent *kikar* and *bér*, with a few *banyan* and *pípal* trees.

The Upper Gugera Branch in this Division was begun in the cold weather of 1895-96, and the Branch was first opened with a small supply in the hot weather of 1898. During this time, nurseries were formed in the rest-house compounds and the compounds stocked with shade and ornamental trees. As soon as water was admitted into the branch, trenches were excavated for avenue sowings. 27·91 miles of avenue have been sown in the Gujranwála District.

5th Division.—This Division comprises the Jhang Lower and Bhawana Branches, and a small portion of the Gugera Lower.

Kikar was sown broadcast on the Jhang Lower and Bhawana spoil banks in 1896-97. These sowings were only partially satisfactory, on account of the very dry weather and the damage done to the seedlings by rats.

During 1898-99 the trench system was adopted, and *shisham* seed sown on both sides of the Jhang Lower, Bhawana, and Lower Gugera Branches. The trenches were watered as far as practicable. On the Lower Gugera the sowings almost entirely failed. Very little water could be given, the soil was poor, and damage was done by cattle and goats. On the upper parts of the other two branches the operations have been very fairly successful.

All rest-house compounds except two were stocked with young trees, which are doing well.

Generally speaking, throughout the circle, the operations during the period under review were not as successful as might have been. The three years have been exceptionally dry ones, and in most of the Divisions, construction work was in full progress, leaving officers little time for arboriculture work. Taking these circumstances into consideration, the progress made has been satisfactory. Even where the operations failed, the greater part of the cost was incurred in trench excavation, and future sowings will be comparatively inexpensive. Moreover with improved arrangements for watering, the next period should exhibit a very decided advance.

JHELUM CIRCLE.

The Divisions on the Jhelum Canal were only constituted in December 1898, and work on that canal was commenced early in 1899. Hence there has been so far no opportunity for any arboriculture up to the end of 1897-98.

1st Division, Jhelum Canal.—This Division comprises the Head-works of the Jhelum Canal, and the first six miles of the main channel. There is in course of formation a Head-works Station at Rasul, and a small area of about 2 acres was sown with *shisham* seed early in the year. The object being to provide a nursery for trees which would eventually be planted out along the roads of the Head-works Station and also along the banks of the main canal. The nursery was irrigated by well water and the trees were coming up well and thriving.

2nd Division, Jhelum Canal.—This Division consists of the main canal, from the sixth to the 40th mile, where the canal divides into two large branches. Work has been started on the main canal but nothing has yet been done on the branches. No arboricultural operations have yet been started with the exception of the collection of some seed of *kikar* which it was proposed to sow broadcast on the spoil banks during the rains. In this Division are also comprised the old Shapur Inundation Canals. The trees grown on these canals were numbered. These trees are all self-sown. They extend in small lengths over short portions of the Inundation Canals, but no attempts have been made as regards arboriculture properly so called. The accompanying map shows the position of trees now growing. No systematic attempts have been made to plant out trees or make avenues.

3rd Division, Jhelum Canal.—This Division has only lately been started and no arboricultural operations have yet been undertaken.

Swít River Canal Division.—

The rainfall returns for the three years under report are as follows :—

	1st April to 30th September.	1st October to 31st March.	Total.
1896-97	24·60	50·09	74·69
1897-98	13·43	5·3	18·73
1898-99	7·35	6·15	13·50
The average of seventeen years being	13·29	9·52	22·81

It will be noticed that the rainfall during 1896-97 was extraordinarily high, whereas during the latter two years it was below the average.

Nurseries.—At the end of 1896-97 there was no area under this head. At the end of 1897-98 one acre only and the same at the end of 1898-99. This acre was on the Kalpani Rájbaha, in order that high uncommanded reaches might be planted out with avenue trees. As these reaches have now been supplied and the remaining trees are mostly too large now to transplant, the area will be transferred to plantations during 1899-1900.

On the Kábul River Canal a start was made during 1898-99, and there is an area of 0·07 under nurseries. The trees will probably all be transplanted during the ensuing year.

Plantations.

								<i>Acres.</i>
Area at end of 1897	...	...	...	...	...	...	...	122·71
Do. 1898	...	...	...	...	...	...	...	122·15
Do. 1899	...	...	...	...	...	...	...	125·78

The new area was taken up on the Kalpani Rájbaha and the return shows no failures during 1898-99, with the exception of this new area all the rest of the plantations consist of well-grown trees which during the last three years have afforded a great amount of fuel. They are being gradually thinned out where there is any chance of a fair return to Government, but in some places the great distances from any market and the cost of carriage prohibits more than can be used locally for firewood being cut down.

Avenues.

Length at end of 1897	...	...	...	...	145·33	} Swát Canal.
Do. 1898	...	...	...	...	163·55	
Do. 1899	...	...	...	...	173·24	
Do. 1899	...	...	...	...	5·0	Kábul River Canal.

Of the new lengths planted out during the last three years not many of the trees are included in the count of trees which has been submitted, as trees of under 1 foot girth have not been included in that count. The ten miles on the Kábul River Canal have all been taken up this year, the results of endeavours having been most satisfactory.

On the Swát Canal the usual method of arboriculture is the water-course system wherever practicable. Boundary ditches are utilized where the width of land will not permit of more than one line of trees. The sides of these ditches are sown with seeds and a good supply of water allowed.

Very few avenue trees are transplantations except in the case of uncommanded land or the filling in of gaps in an already well established avenue.

It may be noted that progress as shown in Statement No. V from year to year does not give a fair idea of the actual work done during the period. *Take for instance the year 1898-99.* The statement shows 13·69 miles planted and 4·0 of failures. These 13·69 miles however are only those in which both sides of a channel have been planted. In addition to these 13·69 miles of a line of each side of channel 14·01 miles were planted on *one side only* (six of these failed). These miles cannot be shown in the statement in which "mileage" includes both sides. A great number of trees were thinned out from the avenues during the three years.

The incomes for the three years were as follows :—

									<i>Rs.</i>
1896-97	...	...	...	...	...	...	...	...	2,066
1897-98	...	...	...	...	...	...	...	...	1,293
1898-99	...	...	...	...	...	...	...	...	2,776

This income is nearly all the result of sale of fuel.

The expenditure is shown in Statement VII, *viz.* :—

						<i>Rs.</i>	<i>a.</i>	<i>p.</i>	
1896-97	...	...	...	...	...	4,434	0	0	} Swát River Canal.
1897-98	...	...	...	...	...	6,384	0	0	
1898-99	...	...	...	...	...	6,275	0	0	
1898-99	...	...	...	...	...	261	8	0	Kábul River Canal.

A map accompanies the report showing the actual state of affairs at the end of 1898-99. Where there are more than two lines of trees the length has been treated as under plantation.

Count of trees.—It will be noticed that the actual number of trees was less at the end of 1898-99 than at the end of 1895-96. This is accounted for by the great number

of trees cut down during the three years, *viz.*, approximately 25,000, resulting in 103,169 c. ft. of wood. A great amount of fuel is still available as there are several miles of avenues and plantations which can with advantage be thinned out. The trees cut down were mostly of class III.

Fruit trees.—During 1895-96 and 1896-97 a date-palm grove was started at Utmanzai. This grove has progressed satisfactorily. The number of trees is 100, the oldest of them are not more than 5 or 6 years of age. It cannot of course be seen for some years. to come whether this grove will be a success, though as a matter of fact two or three of the largest palms are at the present moment bearing fruit, which, however, will, no doubt, be of very inferior quality.

PROVINCIAL DIVISIONS.

HAZARA PROVINCIAL DIVISION.

PESHAWAR SUB-DIVISION.

Rainfall.—No observations are taken by this Department.

Nurseries.—The total area added during the years under report is 0·95 acres. A small demand is made for nurseries, as most of the roads are well stocked with good trees. An area of ·58 acres was transferred to groves owing to various portions of roads being completely stocked.

Plantations.—This return is *nil*, as no areas are planted with trees with the intention of producing a timber crop (*vide* remarks in previous triennial reports).

Groves.—An area of ·58 acres was transferred from nurseries to establish topes, as the trees had become too large for transplanting.

Avenues.—The roadside trees in this district are in a very flourishing condition. *Farash* and *shisham* are the two main kinds with a sprinkling of mulberry, *jaman* and *siris*. During the Frontier Expedition in 1897-98 a great deal of damage was done to young trees. All the young plants on the Nikakki-Charsadda Road were completely eaten by camel &c. These, however, were re-planted in the following year, and are now in a most flourishing state. Where any difficulty is experienced with water, *farash* cuttings are planted, and where water is plentiful young *shisham* saplings planted out.

Income.—This has been derived from the sale of grass, tree-loppings and dead trees.

Expenditure.—The gross expenditure on arboriculture during the years under review is Rs. 10,296.

HAZARA SUB-DIVISION.

Nurseries.—The old nurseries which existed have been maintained with the exception of those on the Murree and Serai Kala Roads, and a small area of new nursery has been prepared elsewhere. The total area added to nurseries during the past three years is 1·422 acres and the area abandoned is ·53 acres. The area abandoned is due to bad soil and the roads having been fully stocked with trees.

Plantations.—There are no plantations on any road in this Sub-Division.

Groves.—There are no groves.

Avenues.—The progress made will be seen from the return submitted. The result is good considering the small establishment employed on maintenance. Only that number of trees is planted out yearly which can be efficiently maintained by the *bhishtis* engaged.

The income during the three years amounted to Rs. 1,684. This was realized from the sale of trees blown down by the wind, from tree-loppings, grass, &c. The expenditure during the period under report is Rs. 7,583-10-5, which is five times the income nearly. The reason for the great excess in expenditure over income is due to the following reasons:—

- (a) The width of road berms on which grass can grow is small, and varies from 8 to 15 feet only. Out of this width borrow pits are made to supply earth to roads.
- (b) The life of trees is generally long. Very few die, and the number blown down by wind is small. Grass does not flourish in many miles where the soil is hard and stony and where the road is in hill side.

RAWALPINDI PROVINCIAL DIVISION.

RAWALPINDI DISTRICT.

1896-97	...	...	...	...	...	...	...	27·95
1897-98	...	...	...	...	...	...	...	29·88
1898-99	...	...	...	...	...	...	...	26·59

The three years have been excessively dry.

For arboriculture purposes the Rawalpindi Sub-Division comprises 91·70 miles of Lahore and Peshawar Road, 13 miles of Rawalpindi-Baracao Road, 3·80 miles of Hazro-Hatti road, 43 miles of Turnout and Kushalgarh Road, 0·44 miles of Lawrencepur link road, 0·50 miles of Gujar Khan link road, 0·22 miles of Mandra link road, 17·0 miles of Haji Shah-

Pind Sultani Road, 12 miles of Jand and Mokhad Road. The trunk roads have four sorts of arboriculture, namely, nurseries, avenues, groves and ornamental gardens.

Nurseries.—The nurseries are nearly all confined to the compounds of the rest-houses on the Lahore and Peshawar Road. During the last three years 0·40 acres of nurseries was used up in replacing the avenues failed, the new plantation was prevented through dryness of the weather.

Avenues.—Trees forming the avenues have been planted outside the formation width of road in parallel lines. During the three years under reference 5·27 miles of trees were planted on roads in Rawalpindi District and 7·87 miles failed, out of which 4·97 miles died through extensive draught and 2·90 miles written off the return in rectifying errors in previous returns.

All of these young plants have been obtained from nurseries in the rest-houses except 0·65 miles on the Rawalpindi Baracao Road, for which chir seedlings were obtained from Forest Department, but all of them died owing to unsuitable soil. Although the figures show a decrease of avenues by 2·60 miles, in reality there is an increase by 0·30 miles of plantation, because there was a failure of 2·90 miles due to an error in previous returns.

Groves.—Groves are established on Rawalpindi Baracao and Lahore-Peshawar Roads in places which were found suitable for arboriculture purposes in respect of soil and water. In consequence of the extraordinary draught in these years there was neither any increase nor decrease in this head.

Ornamental gardens.—The maintenance was only looked after. Gardens have been established at Hasanabdál and Margalla, consisting of grape vine or *dákh*, plantain, plum or *alúcha*, loquat, peach or *arroo*, almond, walnut, *Khurmanies*, &c.

The total expenditure during these three years was Rs. 432 against the revenue Rs. 206. The difference is Rs. 226.

Expenditure and Revenue.—During the past three years Rs. 7,068 have been spent on arboriculture operations and the revenues realized Rs. 4,505, difference Rs. 2,563.

JHELUM DISTRICT.

Rainfall.—The total rainfall for the three years under report has been exceptionally low compared with the previous three years. The average rainfall in the latter case is 37·27 and in the former 20·04. In fact the last four years 1895-96 to 1898-99 have been very dry.

Avenues.—The arboriculture operations during the years under report were mostly confined to planting more lines of young trees in the miles already stocked with trees. In the year 1896-97 nothing could be done except tending the existing young avenues, on account of exceptionally dry year. In 1897-98 one-third of a mile of Lahore and Peshawar Road was planted with double lines of young *shisham* trees, and during 1898-99 1·25 miles of length of lines of young *shisham* trees were added in the miles of Lahore and Peshawar road already stocked with trees.

About 23 miles of the Lahore and Peshawar Road and 2 of Pind Dádan Khan and Chakwál Road are stocked with avenues. Young *shisham* trees in 9 miles of Lahore and Peshawar Road are being tended by plantation establishment.

Groves.—An area of 76·81 acres of groves on Lahore and Peshawar road is fully stocked with trees. The total area of groves on Pind Dádan Khan and Chakwál Road is 4·44 acres, which has a very few trees in it, a number of young *shisham* trees has been planted in gaps of the groves of Lahore and Peshawar Road here and there

Nurseries.—No fresh area has been added to the existing nurseries, seed of *shisham* trees has been sown in the area from which young trees were removed for transplantation.

Revenue.—The revenue realized by the sale of grass and dead trees during the past three years amounts to Rs. 1,671 against Rs. 2,509 of the previous three years, showing a decrease of Rs. 838 in the income.

Expenditure.—The expenditure incurred on arboriculture operations during the three years under review amounts to Rs. 2,779 against Rs. 5,426 in the previous three years and Rs. 8,457 in the three years preceding those, showing a reduction of Rs. 2,647 and Rs. 5,678 respectively.

• The expenditure has exceeded the revenue by Rs. 1,108.

KOHAT PROVINCIAL DIVISION.

Rainfall.—This is not recorded here by the Public Works Department. It is probably about 8 or 10 inches a year only.

Nurseries.—These were mostly planted in 1896-97, but great damage was done to them by the Transport, followers and animals during the Tirah expedition in 1897-98. Since this they have been neglected but are now being re-planted in 1899-1900, and will be ready for transplanting in about two years.

Plantations.—None in this Division.

Groves.—Much damage was done to these in the Tirah Campaign 1897-98. The trees left are thriving fairly well now, though some have died from the severe drought of 1898-99. Progress is very slow in this district owing to the excessively light rainfall and the poor and stony nature of the soil.

Avenues.—The avenues have also suffered severely through the late expedition. This is especially the case on the Kohat Thall road where young trees have been ruthlessly broken and destroyed.

Shisham, mulberry, willow and *kikar* trees were chiefly planted hitherto.

In many places the bad soil and want of water prevent such trees making any progress; during the year 1899-1900, *farásh* slips will be extensively planted and it is hoped better results will be obtained.

The people are lawless and mischievous, and, in a Frontier Division like Kohát, it is most difficult to protect the young trees from wilful damage. However every effort will be made in the ensuing year to stop these practices and a better result is hoped for.

Expenditure.—The expenditure during the last three years has been Rs. 5,055, while the income has only been Rs. 191.

Most of the trees are still quite young and no income can be obtained at present except from some grass near Kohát.

The soil all over the district is very poor and water scarce, trees growing very slowly, so that it will be many years before any substantial income is realised.

GUJRANWALA PROVINCIAL DIVISION.

GUJRANWALA DISTRICT.

During the three years under report the only roads in charge of Public Works Department, Gujranwála Independent Executive Charge, were :—

1st.—Lahore and Pesháwar Road from mile 21 to 63 in Gujranwala District, including two link roads, one leading from mile 29, Lahore and Pesháwar Road to Kamoki Railway Station, and the other from mile 51 to Ghakhar Railway Station.

2nd.—Wazírabad-Siálkot Road in Gujranwála District about 5½ miles in length.

A comparison of the two triennial reports shows that the number of trees are diminishing. The reason is that while trees are yearly dying and sold away by auction the attempt to replace them with younger trees is not successful. On account of this, plots of land that at one time were especially set apart as plantation are bereft of everything except a few trees.

The establishment generally engaged is just sufficient to prevent the damage being done to the trees, as one *máli* to every six miles would be required if sufficient water were available. Much less can therefore be expected when wells are few and far between and the soil such that nothing can be expected to grow without constant supply of water. Not that attempt has been wanting, but generally they have proved a failure except near pools of water, and then too only when a special man was kept to water the plants constantly.

No attempt was made to plant new trees on Wazírabad-Siálkote Road on account of want of establishment. The trees mostly consist of *kikar* and *shisham*, but there are some *sirin* trees also.

List of trees on Grand Trunk Road in Gujranwāla District for the year 1896 to 1899.

No. of miles.	Large trees.	Small trees under 4 years.	Total.	REMARKS.	No. of miles.	Large trees.	Small trees under 4 years.	Total.	REMARKS.
22	170	60	230		Grove.	18	...	18	
23	268	25	293		49	391	16	407	
Grove.	65	...	65		Grove.	76	...	76	
24	366	60	426		50	197	20	207	
Grove.	5	...	5		Grove.	20	...	20	
25	376	50	426		51	192	...	192	
26	210	30	240		Grove.	100	...	100	
Grove.	12	...	12		52	580	317	897	
27	265	70	335		Grove.	75	...	75	
28	687	374	1,061		R. H.	228	...	228	
29	560	100	660		53	705	245	950	
30	518	130	648		Grove.	107	...	107	
Dhillan	10	...	10		54	745	38	783	
R. H.					Grove.	155	...	155	
31	427	70	497		55	1,747	700	2,447	
32	338	45	383		Grove.	136	...	136	
33	753	80	833		56	826	52	878	
Grove.	167	...	167		Grove.	38	...	38	
34	500	35	535		57	849	150	999	
35	403	15	418		Grove.	70	...	70	
Grove.	8	...	8		58	662	57	719	
36	705	300	1,005		Grove.	33	...	33	
37	552	240	792		59	660	112	772	
38	734	267	1,001		Grove.	40	...	40	
39	772	50	822		60	645	15	660	
40	449	25	474		Grove.	46	...	46	
41	302	95	397		61	192	70	262	
42	821	259	1,080		Grove.	40	...	40	
Grove.	52	...	52		R. H.	161	...	161	
43	900	336	1,236		62	679	264	943	
Grove.	189	...	189		63	197	...	197	
44	796	40	836		Sialkot and Wazirabad Road.				
Grove.	52	...	52		23	70	...	70	
45	842	28	870		24	180	...	180	
Grove.	150	...	150		25	157	...	157	
46	608	37	645		26	254	...	254	
Grove.	82	...	82		27	691	50	741	
47	187	13	200		28	257	118	375	
Grove.	116	...	116						
48	318	33	351						

GUJRAT SUB-DIVISION.

The following roads and places in the Gujrat District are, or are being, planted with trees and are otherwise fit for arboricultural operations—

(i) Lahore and Peshāwar Roads from mile 64·11 (right bank of river Chenāb) to mile 101 (left bank of river Jhelum) ... 36·07 miles

(ii) Approach Roads leading to Public Works Department Inspection Bungalows, as below :—

(a) Kathāla	...	...	...	...	750 feet
(b) Lāla Musa	...	...	...	...	750 "
(c) Khārian	...	...	...	...	600 "
(d) Naurangābad	...	...	...	...	800 "

2,900
5,280 = 0·54

(e) Compounds of inspection bungalows.

(iii) Branch Road shooting in mile 70 and after passing across the Gujrat City and Katchery re-joins the Lahore and Peshāwar Road in mile 72 ... 3·46

(iv) Bhimbar (old and new) Bunds including spurs on the left bank of Bhimbar Nullah ... 2·14

(v) Link Roads to Railway Stations as below :—

(1) Lāla Musa	...	...	...	...	1,100 feet
(2) Khārian	...	...	...	...	1,200 "
(3) Karyāla	...	...	...	...	1,200 "

3,500
5,280 = 0·67

Total ... 42·88

(vi) In addition to above there are 16 groves and 5 compounds of inspection bungalows of various dimensions along the Lahore and Pesháwar road which are capable of being or are already planted with full grown or young trees.

The Lahore and Peshawar road is provided with avenues in single, double, triple and even four and more lines on each side of the road according to the quality of the soil, but there are a good many places along this road such as miles 75, 76, 77, 78 and part of mile 80 that have very thin and in places none or next to no avenues.

The majority of the trees in the avenues and groves, &c. are *kíkar*, both full grown and young ones, but *shísham* trees are also flourishing in miles 68, 69, 70, 71, 72, 74, 77, 82, 83, 84, 85, 100 and 101; and almost all groves have well grown *shísham* trees.

A regular gang of *bhistís* is kept to grow, transplant and tend young trees along the road which are transferred to the list of stock when full grown (above 10 feet high) as the annexed statement will show.

II.—Approach roads to Public Works Department Inspection Bungalows:—

Out of these, the roads to Kathála, Lála Musa and Narangabad have full grown trees (almost all *shísham*) on both sides. Of the other two, Gujrát has no approach road and that for Khárian have none or next to no trees.

Inspection Bungalow Compounds.—Kathála, Lála Musa and Narangábad have *shísham* trees, Gujrát and Kathála have a good many fruit trees in addition, and Khárian has a few well grown *kíkar* trees.

III.—*Branch road.*—This road has got thickly established, full grown, shady *shísham* and a few *siris* trees on both sides.

IV.—*Bhimbar bunds.*—(Old and New) *shísham*, *kíkar*, willow, *farsh* and reeds are growing rapidly on both sides, some are full grown trees, more are being planted and regular *bhistís* are kept to take care of and water them.

V.—*Link roads.*—Lála Musa road has full grown *shísham* trees, on one side only, and young trees are growing up on Khárian Link road but the others have no trees at all.

The attached statement will show how many grown up trees have since been transferred to stock, particularly in miles 66, 68, 69, 70, 71, 72, 77, 82, 83, 84, 85, 92, 100 and 101. Some failures in the growth of young trees occurred owing to severe drought and the inefficiency of the *bhistís* to water and take care of all in their respective charges.

Experience has shown that to grow more trees than can be taken care of or to plant very small (say 2 feet or under) is of no use but waste of money and time, and to grow young trees scattered all over the country brings the same results. To start within a limited space that can easily be controlled and looked after has been found very satisfactory.

Broadcast *shísham* and *kíkar* seed growth is being tried on the lower berms of the road.

The only nursery at Gujrát has very nearly been exhausted and fresh ones are being started at Kathála, Gujrát, Lála Musa and Naurangábad.

It is a pity that no trees except *kíkar*, and that of very inferior quality, do grow in miles round Khárian. Good many old *kíkar* trees have dried up or been brought down by the recent heavy and extraordinary winds. These are being replaced by young ones, but it will take long before they grow up.

Phulai seeds will be sown broadcast along both sides of the road in Pabbi, miles 93 to 97; nothing else grows there satisfactorily.

There are no ornamental gardens in this Sub-Division.

Statement showing the number of old and young trees actually counted on the 15th of July 1899.

Number of miles.	Number of full grown trees on road side.	Number of trees in groves.	Number of trees on approach link road.	Number of trees in rest-house compounds.	Number of trees in police chanki compounds.	Total number of trees.	Number of young trees grown up added in stock.	Total of young trees not added in stock.	REMARKS.
65	65	88	...	42	70	265	...	...	
66	451	20	24	114	...	609	38	208	
67	562	182	...	...	...	744	...	...	
68	564	...	...	...	...	564	13	277	
69	575	244	...	...	...	819	123	259	
70	651	...	...	...	...	651	122	293	
71	414	131	...	...	...	545	123	144	
72	575	...	...	...	...	575	246	129	
73	420	36	...	...	...	456	...	66	
74	530	...	...	56	...	586	...	...	
75	199	134	...	...	...	333	...	173	
76	154	...	...	...	...	154	...	...	
77	150	74	...	...	...	224	86	354	
78	388	...	...	...	...	388	...	...	
79	472	178	...	...	...	650	...	...	
80	329	...	...	...	...	329	...	...	
81	447	141	...	...	...	588	...	...	
82	327	...	...	...	...	327	25	336	
83	485	160	31	70	...	746	238	338	
84	543	...	...	...	...	543	294	92	
85	503	121	...	...	...	624	224	324	
86	992	...	...	...	...	992	...	...	
87	430	229	...	...	...	659	...	...	
88	758	...	...	...	...	758	...	...	
89	767	140	...	...	...	907	...	...	
90	1,030	...	...	...	...	1,030	...	...	
91	758	...	...	...	...	758	...	...	
92	888	...	...	...	...	888	13	194	
93	272	24	...	...	...	296	...	...	
94	174	...	...	...	...	174	...	...	
95	350	...	...	...	...	350	...	...	
96	290	...	...	...	...	290	...	...	
97	318	24	...	...	...	342	...	...	
98	516	...	...	...	...	516	...	...	
99	1,040	334	...	...	...	1,374	...	...	
100	799	...	...	...	...	799	5	700	
101	723	209	...	51	...	983	127	123	

LUDHIANA PROVINCIAL DIVISION.

The rainfall during 1898-99 in the four districts Ludhiána, Jullundur, Hoshiárpur and Kangra seems fair, *i. e.*, neither more nor insufficient according to requirements ; it being 20·44, 18·65, 38·63 and 120·27 respectively.

Very little in fact no establishment was employed for watering the trees owing to the introduction of the broadcast sowing system of seeds as ordered in Superintending Engineers No. 3834, dated 28th June 1897.

The rainfall has been taken from the *Punjab Gazette*.

Nurseries.—There are five nurseries in the Division, having an aggregate area of 5·35 acres *vide* Statement No. II.

Plantations.—There are no plantations in the Division except a very small area, *i. e.*, 5·55 acres in the Jullundur District.

Groves.—In the Jullundur District there was an area of 5·25 acres under groves at the beginning of the year ; it is still the same. In the Ludhiána District the area under this head is 32·63 acres.

Avenues.—The following are the roads in this Division :—

Grand Trunk road from Phillour to Beás 50·37 miles, of which 50 miles are suitable for avenues.

Jullundur-Hoshiárpur road 25 miles, of which 24 miles are suitable for avenues.

Hoshiarpur-Dharmasala road. This road runs mostly through hills. The length suitable for avenues is only 5·58 miles, *vide* Statement V. Kangra Valley cart road. This road also like the foregoing one runs through the hills but in a better country. There are 65 miles suitable for avenues, of which 19,419, are planted, *vide* Statement V.

Ludhiána District has two roads—Grand Trunk road and Ludhiána-Ferozepur road.

The length suitable for avenues in the former is 37 miles, in the latter 28·14, of these lengths 23·93 and 26·50 are respectively planted with trees.

Income.—The income from the several sub-heads of arboriculture realized and credited to Government during the year amounted to Rs. 4,251 plus 2,197 in the Ludbiána District against Rs. 2,988 plus 1,089 and Rs. 2,744 plus 1,438 in the two preceding years. The increase in income during the year is due to better arrangement in the disposal of road produce.

Expenditure.—The total expenditure on several sub-heads of arboriculture in the Division during the year amounts to Rs. 282 plus 529 in the Ludhiana District as compared with Rs. 522 plus 709 and Rs. 1,305 plus 836 in the two preceding years. This reduction in the expenditure is due to the introduction of the broadcast sowing of seed system.

SIMLA PROVINCIAL DIVISION.

Rainfall.—The actual rainfall of the year under report exceeds that of the preceding year by 1·29, but it is less by 1·85 inches than that of 1896-97. The information regarding rainfall has been obtained from the Meteorological Department.

Nurseries.—There is no regular nursery planting in this Division, as will be seen from Statement No. II.

Plantations.—There are no regular plantations in this Division, as will be seen from Statement No. III.

Groves.—There are no groves in this Division; about 1,300 trees and shrubs were planted during 1890-91 and in 1891-92 on the hill sides above the Army Headquarters and Civil Secretariat Offices at Simla, but these do not increase the area of such groves. Besides these trees would come within Municipal limits of Simla, a report of which is presumably submitted by the Deputy Commissioner. On Prospect Hill some sites of dismantled houses were planted as previously reported and the place made into a pleasure ground.

Avenues.—There are no regular arboriculture operations in this Division. The Hindustan-Thibet road and Kálka-Simla roads pass through Native States. The only portion over which the Executive Engineer is supposed to have any control is a strip 100 feet wide on each side of the road, but he has no control at all over the planting of this.

Every endeavour is being made to encourage young trees to grow at the following places:—

1. Viceregal Lodge at Simla.
2. Prospect Hill "
3. Foreign Offices "
4. Army Head-quarters "
5. Winterfield "
6. Barnes Court "
7. Ellerslie "
8. Benmore "
9. Koti landslip, mile 7th Kalka-Simla cart road.

The ornamental gardens under charge of this Division are at the places numbered 1—11 as given below:—

Income.—No income.

Expenditure.—Rs. 16,652 is the total expenditure as below.

			1896-97.	1897-98.	1898-99.	
			Rs.	Rs.	Rs.	
1.	Maintenance garden at Barnes Court, Simla	...	...	399	600	
2.	Do. do. Ellerslie	...	...	157	150	
3.	Do. do. Benmore	...	...	145	140	
4.	Do. do. Winterfield	...	...	84	...	
5.	Do. do. Viceregal Lodge	...	...	3,000	3,000	
6.	Do. do. Prospect Hill,	...	...	300	277	
7.	Do. do. Foreign Office	...	4,970	96	96	
8.	Do. do. Army Head-quarters	...	...	96	96	
9.	Do. do. Snowdon	...	...	350	335	
10.	Do. do. Arnsdell	...	...	100	108	
11.	Do. do. Retreat at Mashobra	...	...	750	759	
12.	Do. do. Branch cart road to Railway station at Kalka	}	...	50	...	
13.	Do. do. Koti landslip, 7th mile, Kalka-Simla cart road		...	402	192	
Total			...	4,970	5,929	5,753

Map of District.—As no regular arboriculture operations are going on in this Division the map called for in para. 11 of the "Instructions" for the preparation of triennial report and annual statements is not necessary.

UMBALLA PROVINCIAL DIVISION.

Nurseries.—The opening balance on 1st April 1896 of nurseries was:—

	Acres.	Acres.
Karnál District	·28	
Umballa do.	·68	Total
		·96

Vide Triennial Report for the period ending 31st March 1896.

The area added since was —

1896-97 Karnál District	·03	
1897-98 Umballa do.	·33	
1898-99 do. do.	nil	
		·36
Total area in acres		1·32

The area transplanted to roadside was—

1896-97 Karnál District	·02	
Do. Umballa do.	·18	
1897-98 Karnál do.	·30	
1898-99 Do. do.	·06	·56
Balance area on 31st March 1899 in acres		·76

The distribution of ·76 acres is—

Karnál District	·52	
Umballa do.	·24	·76

It may be noted that the actual balance on 1st April 1898 in Umballa and Karnál Districts was —

	Acres.
Umballa District	·53
Karnál do.	·29
Total	·82

but owing to the Pipli Tahsíl of Umballa District having been annexed to Karnál District the boundaries of Karnál District have been extended, consequently the following changes had to be made:—

	Acres.
Umballa District area	·53
Transferred to Karnál District	·29
Net balance in Umballa District	·24
Karnál District area	·29
Area transferred from Umballa to Karnál District	·29
	·58
Area transferred to roadside	·06
Net balance at present	·52

Plantations.—There are no plantations in this Division, hence this statement is blank.

Groves.—There being no groves in this Division hence this statement is blank.

Avenues.—The following roads are in this Division suitable for avenues:—

KARNAL DISTRICT.

	Miles.
Grand Trunk road, from mile 39 to 113 $\frac{1}{2}$	75.87
Approach roads	3.38
Markunda main bund	4.00
Kharindwa-Adhwa Railway feeder road	5.00
Total	88.25

UMBALLA DISTRICT.

	Miles.
Grand Trunk road, mile 113.87 to 161	47.13
Umballa-Kálka road	33.97
Approach roads	.80
Kharindwa-Adhwa feeder road	5.00
Adhwa-Jagádhri road	23.50
Total	110.40
GRAND TOTAL	198.65

The Grand Trunk road, mile 39 to 161, runs through Umballa and Karnál Districts.

	Miles.
The length planted during 1896-97 was	20.12
Ditto do. 1897-98 „	9.42
Ditto do. 1898-99 „	1.00
Total	30.54
The length failed during 1896-97 was	16.25
Do. do. 1897-98 „	0.50
Do. do. 1898-99 „	1.05=17.80

The failure was owing to want of rains.

There was no sowing nor failure during 1898-99.

Approach Roads to Railway Stations.

The length of approach roads suitable for avenues in Karnál District is 3.38 miles and the lengths planted with trees are :—

	Miles.
Opening balance on 1st April 1896	1.00
Planted during 1896-97	1.00
Ditto 1897-98	.50
Ditto 1898-99	1.00
Transferred from Umballa District, 1898-99	.12
	3.62

The lengths failed are—

During 1896-97	Nil
Do. 1897-98	0.25
Do. 1898-99	1.05
Net balance	2.32

stocked with trees.

Markunda Main Bund 4.00.

This plot was planted with trees during 1897-98 but nothing during 1898-99, and has now been transferred from the Umballa to Karnál District.

Kharindwa-Adhwa Railway Feeder Road 10 miles.

The total length suitable for avenues is 10 miles, of which 9 miles has been fully stocked with trees.

4.50 miles are in Karnál District and 4.50 miles in Umballa District.

Umballa-Kálka Road, 4.38 miles.

The length of this road suitable for avenues is 33.97 miles in Umballa District, of which 23.30 miles are fully stocked with trees and there was no addition or failure of avenues during 1896-97, 1897-98 and 1898-99.

The length of approach roads to Railway Stations on Umballa and Kálka road and Dhulkot on Grand Trunk road is .80 miles in Umballa District and was planted with trees during 1897-98.

Shahábad and Jagádhi Road.

Section from Adhwa to Jagádhi is $23\frac{1}{2}$ miles. The entire length of this road is provided with, and is suitable for, avenues.

It should be noted that the boundary of Karnál District has been extended in consequence of which the following lengths of roads have been transferred from the Umballa to Karnál District :—

	Miles.	Miles.
1. Grand Trunk Road	92—113·87=22·87	
2. Markunda Main Bund	0	4·0
3. Kharindwa-Adhwa feeder road		5·00
4. Approach road to Kharindwa Railway Station		·12
Total		<u>31·99</u>

Accordingly the necessary additions and alterations have been made in Statement No. V.

Income.—The sum of Rs. 6,774 against Rs. 4,782 and Rs. 6,890 in the two preceding years on account of sale proceeds of dead and fallen trees, grass and fruits of the roads under charge of this Division was received during the year 1898-99 and credited to Provincial receipts.

The net income during the period under report was as below :—

	Rs.
During 1896-97	4,782
Do. 1897-98	6,890
Do. 1898-99	6,774
Total	<u>18,446</u>

The net income after deducting the expenditure of the past three years amounts to Rs. 13,989, thus :—

	Rs.
1896-97	1,686
1897-98	1,667
1898-99	1,104
Total	<u>4,457</u>

therefore Rs. $18,446 - 4,457 = 13,989$.

Expenditure.—The amount of Rs. 1,104 against Rs. 1,686 and Rs. 1,667 in the previous two years expended on maintenance of avenues during 1898-99.

Maps of Districts.—Maps of Umballa and Karnál districts indicating the arboricultural operations are sent herewith.

DELHI PROVINCIAL DIVISION.

DELHI-SUB-DIVISION.

Consisting of Delhi and Gurgaon districts.

Nurseries.—There are no nurseries.

Plantations and Groves.—There are no plantations and groves.

Avenues.—

	Miles.
Total length of roads in Delhi District	97·25
Ditto in Gurgaon District	Nil.

From the total length of the roads a length of 90 miles is suitable for avenues, of which a length of 69·75 miles is fully stocked with trees as below :—

	Miles.
Grand Trunk road	20·00
Delhi and Rohtak road in Delhi District	14·50
Delhi and Muthra road	21·90
Delhi and Gurgáon road	13·35
Total	<u>69·75</u>

The remaining length $90 - 69·75 = 20·25$ miles is unfit for plantation.

During the period under reference broadcast seed was sown over a length of 150 miles by digging trenches, but owing to unfavourable rains and attack of locusts it proved a failure.

Income.—The average yearly income during the period under reference is Rs. 1,550, of which Rs. 643 are for grass and Rs. 907 for sale of dead and fallen trees.

Expenditure.—Average expenditure on arboriculture is Rs. 799.

HISSAR SUB-DIVISION.

Consisting of Rohtak and Hissar districts.

Nurseries.—There are no nurseries.

Plantations and Groves.—There are no plantations and groves.

Avenues.—

					Miles.
Total length of road in Rohtak District	...	...	...	...	84
Do. in Hissar District	...	...	...	...	9.25

Total length of roads given above in both districts are suitable for avenues, but only a length of 28 miles is fully stocked with trees, the remaining length is partially planted with trees.

During the period under report broadcast seed was sown over a length of 112 miles by digging trenches, but owing to untimely rains or drought and attack of locusts the seedlings failed.

Income.—The average yearly income during the period under report is Rs. 89, of which Rs. 11 is for grass and Rs. 78 for sale of dead and fallen trees.

Expenditure.—Average yearly expenditure on arboriculture for the period under report is Rs. 409.

The income is far short of expenditure, because the expenditure on District Board roads is in hands of the Public Works Department, but the income is realized by the District Boards direct.

DERA ISMAIL KHAN PROVINCIAL DIVISION.

DERA ISMAIL KHAN DISTRICT.

Nurseries.—The area under seedlings at the end of 1896-97 was 0.41 acres and an area of 0.11 acre was added during the years under report and 0.21 were transferred to groves. This leaves the total area of nurseries at the end of these three years 0.31.

Plantations.—At the beginning of 1896-97 the area under plantation was 156.00 out of which 1.3 acres were planted during the three years. This leaves an area of plantation at the end of 1898-99 of 157.3 acres.

Groves.—At the beginning of the year 1896-97 the area of groves was only 16.06 acres and 0.36 acres were planted and transferred from nurseries and 0.33 acres have failed for want of water. This leaves the area under groves at end of 1898-99 16.09 acres.

Avenues.—0.9 miles have been added during the past three years in Dera Ismail Khan District and 0.91 miles have failed.

BANNU SUB-DIVISION.

Nurseries.—The area under seedlings at the end of 1896-97 was 0.338 acres and the same was transferred to groves during 1898-99 leaving *nil* at the end of 1898-99.

Plantations.—At the beginning of 1896-97 the area under plantation was 0.184 acres and 0.504 were planted and 0.608 acres failed during the three years. Thus leaving an area of plantation at the end of 1898-99—0.08 acres.

Groves.—At the beginning of the year 1896-97 the area of groves was only .4 acres and 0.953 acres were planted and transferred from nurseries and 0.695 acres failed. This leaves the area of 0.658 under groves at end of 1898-99—0.658 acres.

Avenues.—4.055 miles have been added during the past three years and 1.595 miles have failed.

DERA GHAZI KHAN PROVINCIAL DIVISION.

DERA GHAZI KHAN SUB-DIVISION.

Nurseries.—The only nursery in this Sub-Division is at mile 5 on the Peshin road. It was maintained during the last triennial period and will be abandoned from 1899-1900, as the land is no longer suitable to rear trees and watering arrangements are scanty. Nurseries will be started at Public Works Department rest-house and godown at Dera Gházi Khan, where the water supply is excellent and cheap.

MUZAFFARGARH SUB-DIVISION.

No nurseries were maintained, but the trees when required are generally purchased from zamíndárs. This arrangement is cheaper than maintaining nurseries for the roads in this Sub-Division.

MOOLTAN SUB-DIVISION.

No additions were made to the nurseries during the years under report.

DERA GHAZI KHAN, MUZAFFARGARH.

Groves.—The total area under groves at the end of 1895-96 was 2·99 acres, while at the close of the triennial period under report amounted to 4·66 acres. The increase is due to the amalgamation of late Mooltan Independent Executive Charge to this Division.

There was also a failure of ·03 acres in the groves maintained in the Dera Gházi Khan Sub-Division in 1896-97, which was due to heavy floods in those years.

DERA GHAZI KHAN SUB-DIVISION.

Avenues.—There have been failures of ·16 and ·25 miles during 1897-98 and 1898-99, respectively, which are due to rise of sub-soil water.

MUZAFFARGARH SUB-DIVISION.

There has been no increase made in extending the length of roads stocked with trees during the triennial period under report. The young trees that had failed during the period under review were replaced by fresh avenues.

MOOLTAN SUB-DIVISION.

The length of different roads in the late Mooltan Independent Executive Charge fully stocked with trees as reported at end of 1895-96 was 25·83 miles and that it is 26·36 miles at end of 1898-99, which shows an increase of ·53 miles.

There was a failure of ·22 miles on Mooltan Shershah road during 1898-99, owing to poor soil.

Income.—The income from the arboriculture during the triennial period under review was invariably small owing to there being very few sales of dead trees and loppings.

LAHORE PROVINCIAL DIVISION.

Nurseries.—At the close of 1895-96 the area under nurseries was 4·76 acres, to which 5·27 acres were added during the three years under report including ·59 of an acre received in transfer from the late Amritsar Provincial Division. But the total (10·03 acres) was again subjected to a deduction on account of failure, transplantation, &c., and stood at 5·29 acres at the end of 1898-99, thus :—

Total area at the beginning of 1896-97	...	...	...	...	Acres.	4·76
Additions during 1896-97 to 1898-99	...	...	...	...	...	5·27
				Total	...	10·03
(a) Transferred to groves	...	...	...	...	Acres.	3·68
(b) Given up	...	...	...	...	...	0·47
(c) Re-transferred to Amritsar	...	...	...	...	...	0·59
					4·74	—4·74
				Total	...	5·29

Plantations.—Nil.

Groves.—21·92 acres of groves were stocked with trees at the beginning of 1896-97. During the period under review 3·68 acres were transferred from nurseries ; ·28 of an acre was added and 6·50 acres failed, leaving a total area of 19·38 acres at the close of 1898-99.

Avenues.—The mileage of avenues on the different roads is as follows :—

					<i>Miles.</i>
(a)	Grand Trunk Road, Beas to Attári ...	...	...	...	41·05
(b)	" Attári to Shalámar ...	...	...	...	15·12
(c)	" Lahore to Pesháwar Road ...	...	...	...	12·70
(d)	" " and Ferozepore Road ...	...	...	...	37·77
(e)	" " and Shekhupura Road ...	...	...	...	16·30
(f)	" " Civil Station roads (portion) ...	...	...	...	4·40
(g)	" Kangra Valley cart-road ...	...	...	...	3·50
(h)	" Pathankot and Dalhousie Road ...	...	...	...	4·24
Total					<u>135·08</u>

They are stocked as thus :—

18·40	with one line of trees.
36·52	" two lines of trees.
14·14	" three lines of trees.
36·32	" four lines of trees.
8·32	" five lines of trees.
13·43	" six lines of trees.
3·52	" seven lines of trees.
4·19	" eight lines of trees.
·24	" nine lines of trees.
Total ... <u>135·08</u>	

The difference between the total length at beginning of 1896-97 and that at the end of 1898-99 is accounted for thus :—

Total length at beginning of 1896-97 ...	...	...	...	<i>Miles.</i>
				125·34
Add—Length planted during the three years under review				20·87
				<u>146·21</u>
Deduct—Failure	...	...	...	11·13
				<u>135·08</u>

Income.—The sale proceeds realised under different heads amounted to Rs. 16,916 or an average of Rs. 5,638 per annum.

Expenditure.—The total expenditure on arboricultural operations during the three years under notice was Rs. 12,042 or an average of Rs. 4,014. The net income therefore was Rs. 4,874 or Rs. 1,625 per annum.

FIROZPUR DISTRICT.

There is no important feature in the arboricultural operations of the Firozpur District during the years 1896-97 to 1898-99 which is worth mentioning.

STATEMENT No. I.

Rainfall Return.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	AVERAGE RAINFALL OF PAST YEARS.			RAINFALL OF YEAR UNDER REPORT.			REMARKS.
		1st April to 30th September.	1st October to 31st March.	Total.	1st April to 30th September.	1st October to 31st March.	Total.	
Muzaffargarh	1896-97 1897-98 1898-99	4·64	1·06	5·70	0·70 7·34 3·18	0·53 1·86 0·12	1·23 9·20 3·30	
Mooltan	1896-97 1897-98 1898-99	4·72	1·17	5·89	0·92 10·04 2·12	0·34 1·88 0·28	1·26 11·92 2·40	
Dera Gházi Khan	1896-97 1897-98 1898-99	6·55	1·99	8·54	0·79 4·39 6·73	0·62 1·25 0·27	1·41 5·64 7·00	
Dera Ismail Khan	1896-97 1897-98 1898-99	5·73	2·24	7·97	1·72 7·54 1·24	2·32 5·04 2·23	4·04 12·58 3·47	
Montgomery	1896-97 1897-98 1898-99	9·08	1·68	10·76	7·38 6·99 3·55	1·76 1·61 0·57	9·14 8·60 4·12	
Jhang	1896-97 1897-98 1898-99	6·82	1·79	8·61	5·58 14·14 3·81	2·10 2·20 0·18	7·68 16·34 3·92	
Bannu	1896-97 1897-98 1898-99	8·02	3·28	11·30	5·85 14·32 8·03	5·85 4·46 4·52	11·70 18·78 12·55	
Shahpur	1896-97 1897-98 1898-99	11·04	3·58	14·62	10·42 16·65 11·50	2·59 3·85 0·52	13·01 20·50 12·02	
Hissár	1896-97 1897-98 1898-99	14·18	2·37	16·55	5·28 23·03 8·96	0·77 1·78 0·01	6·05 24·81 8·97	
Ferozpur	1896-97 1897-98 1898-99	15·38	2·07	18·05	2·72 8·98 13·00	2·53 4·79 0·52	5·25 13·77 13·52	
Pesháwar	1896-97 1897-98 1898-99	6·65	5·42	12·07	0·93 9·86 7·13	6·62 5·77 5·77	7·55 15·63 12·90	
Kohát	1896-97 1897-98 1898-99	11·99	6·31	18·30	8·16 13·03 8·87	6·73 5·94 4·50	14·89 18·97 13·37	
Rohta	1896-97 1897-98 1898-99	17·93	2·26	20·19	9·28 19·04 17·71	0·11 1·40 0·89	9·39 20·44 18·60	
Lahore	1896-97 1897-98 1898-99	14·73	3·07	17·80	7·42 12·93 12·76	2·44 5·62 0·82	9·86 18·55 13·58	
Karnál	1896-97 1897-98 1898-99	25·70	4·02	29·72	16·56 20·52 15·34	1·40 5·94 2·98	17·96 26·46 18·32	
Jhelum	1896-97 1897-98 1898-99	16·35	5·49	21·84	14·35 17·79 21·73	6·01 7·33 1·84	20·36 25·12 23·57	
Gujránwála	1896-97 1897-98 1898-99	18·43	4·86	23·29	8·87 10·98 17·59	3·43 4·68 1·32	12·30 15·66 18·91	
Gurgáon	1896-97 1897-98 1898-99	23·65	2·39	26·04	13·00 17·26 12·35	1·03 2·11 0·78	14·03 19·37 13·13	

STATEMENT No. I—concluded.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	AVERAGE RAINFALL OF PAST YEARS.			RAINFALL OF YEAR UNDER REPORT.			REMARKS.
		1st April to 30th Sep- tember.	1st October to 31st March.	Total.	1st April to 30th Sep- tember.	1st October to 31st March.	Total.	
Amritsar	{ 1896-97 1897-98 1898-99 }	21.33	4.52	25.85	{ 15.31 12.27 18.08 }	2.77 5.54 0.95	18.08 17.81 19.03	
Delhi	{ 1896-97 1897-98 1898-99 }	25.11	2.97	28.08	{ 21.23 20.54 13.85 }	1.23 2.86 1.34	22.46 23.40 15.19	
Jullundur	{ 1896-97 1897-98 1898-99 }	23.50	4.53	28.03	{ 15.52 19.05 16.87 }	3.87 4.19 1.78	19.39 23.24 18.65	
Ludhiāna	{ 1896-97 1897-98 1898-99 }	22.45	4.15	26.60	{ 13.35 18.82 18.39 }	2.48 4.16 2.05	15.83 22.98 20.44	
Rāwalpindi	{ 1896-97 1897-98 1898-99 }	22.32	8.87	31.19	{ 19.24 23.25 23.01 }	8.71 6.63 3.58	27.95 29.88 26.59	
Gujrāt	{ 1896-97 1897-98 1898-99 }	19.83	6.52	26.35	{ 11.35 9.50 17.67 }	4.16 6.13 2.08	15.51 15.63 19.75	
Gurdāspur	{ 1896-97 1897-98 1898-99 }	25.52	5.43	30.95	{ 22.08 32.03 31.17 }	4.81 7.35 3.12	26.89 39.38 34.29	
Umballa	{ 1896-97 1897-98 1898-99 }	29.32	3.93	33.25	{ 22.60 23.97 21.21 }	1.65 9.46 2.87	24.25 33.43 24.08	
Siālkot	{ 1896-97 1897-98 1898-99 }	28.62	5.87	34.49	{ 12.53 13.58 25.42 }	4.53 5.89 2.42	17.06 19.47 27.84	
Hoshiārpur	{ 1896-97 1897-98 1898-99 }	28.36	6.06	34.42	{ 19.84 15.64 32.59 }	5.93 6.17 6.04	25.77 21.81 38.63	
Simla	{ 1896-97 1897-98 1898-99 }	55.80	8.42	64.22	{ 38.11 41.09 43.04 }	13.25 6.84 6.47	51.36 47.93 49.51	
Hazāra	{ 1896-97 1897-98 1898-99 }	30.02	14.62	44.84	{ 19.03 33.53 36.03 }	20.16 13.63 6.75	39.19 47.16 42.78	
Kāngra (Dharm- sāla).	{ 1896-97 1897-98 1898-99 }	104.64	15.66	120.30	{ 92.88 103.21 106.94 }	20.11 11.81 13.33	112.99 115.02 120.27	

STATEMENT No. II.

Progress statement of Nurseries in the Districts for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7
District.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Muzaffargarh ...	1896-97	1.51	...	...	1.51	
	1897-98	1.51	...	...	1.51	
	1898-99	1.51	...	...	1.51	
Mooltan ...	1896-97	44.64	0.56	0.46	44.74	
	1897-98	44.74	0.42	15.04	30.12	
	1898-99	30.12	0.24	...	30.36	
Dera Gházi Khan ...	1896-97	5.10	0.15	...	5.25	
	1897-98	5.25	...	...	5.25	
	1898-99	5.25	...	...	5.25	
Dera Ismaíl Khan ...	1896-97	11.78	Nil.	Nil.	11.78	
	1897-98	11.78	0.90	"	12.68	
	1898-99	12.68	0.28	1.75	11.21	
Montgomery ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98	Nil.	Nil.	Nil.	Nil.	
	1898-99	Nil.	Nil.	Nil.	Nil.	
Jhang ...	1896-97	17.30	0.25	3.63	13.92	
	1897-98	13.92	8.53	15.82	6.63	
	1898-99	6.63	24.23	19.49	11.37	
Bannu ...	1896-97	7.64	0.98	0.03	8.59	
	1897-98	8.59	0.08	8.32	0.35	
	1898-99	0.35	0.25	0.08	0.52	
Sháhpur ...	1896-97	5.57	1.27	0.46	6.38	
	1897-98	6.38	0.68	2.99	4.07	
	1898-99	4.07	1.84	1.82	4.09	
Hissár ...	1896-97	124.55	...	...	124.55	
	1897-98	124.55	...	...	124.55	
	1898-99	124.55	...	...	124.55	
Ferozpur ...	1896-97	1.25	0.50	0.75	1.00	
	1897-98	1.00	2.50	2.00	1.50	
	1898-99	1.50	1.50	2.00	1.00	
Pesháwar ...	1896-97	72.82	0.37	...	73.19	
	1897-98	73.19	0.37	...	73.56	
	1898-99	73.56	5.10	...	78.66	
Kohát ...	1896-97	0.59	0.06	0.53	0.12	
	1897-98	0.12	0.19	0.12	0.19	
	1898-99	0.19	0.12	0.12	0.19	
Rohtak ...	1896-97	1.93	0.14	0.04	2.03	
	1897-98	2.03	...	...	2.03	
	1898-99	2.03	...	0.18	1.85	
Lahore ...	1896-97	8.47	...	...	8.47	
	1897-98	8.47	...	...	8.47	
	1898-99	8.47	...	...	8.47	
Do. Municipality ...	1896-97	0.40	...	0.20	0.20	
	1897-98	0.20	...	...	0.20	
	1898-99	0.20	...	...	0.20	
Karnál ...	1896-97	8.53	...	...	8.53	
	1897-98	8.53	1.89	0.04	10.38	
	1898-99	10.38	...	...	10.38	
Jhelum ...	1896-97	9.40	0.16	...	9.56	
	1897-98	9.56	0.09	...	9.65	
	1898-99	9.65	1.44	...	11.09	
Gujránwála ...	1896-97	164.44	6.43	...	170.87	
	1897-98	170.87	0.13	0.12	170.88	
	1898-99	170.88	0.01	0.01	170.88	

a 1.89 acres include 0.04 of an acre transferred from the Umballa District. Column 5 shows 0.04 of an acre transferred to groves.

STATEMENT No II.—continued.

1	2	3	4	5	6	7
District.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Gurgáon	1896-97	2.10	...	...	2.10	
	1897-98	2.10	...	...	2.10	
	1898-99	2.10	...	...	2.10	
Amritsar	1896-97	45.12	8.67	b 33.02	20.77	b 33.02 acres transferred to groves.
	1897-98	20.77	1.00	...	21.77	
	1898-99	21.77	1.00	...	22.77	
Do. Municipality ...	1896-97	7.34	...	...	7.34	
	1897-98	7.34	...	...	7.34	
	1898-99	7.34	6.17	6.17	7.34	
Delhi	1896-97	0.76	c 0.01	...	0.77	c 0.01 of an acre due to correction of previous return.
	1897-98	0.77	...	d 0.03	0.74	
	1898-99	0.74	0.12	0.18	0.68	d 0.03 of an acre transferred to groves.
Jullundar	1896-97	8.96	Nil.	e 2.69	6.27	e 2.69 acres transferred to groves.
	1897-98	6.27	...	...	6.27	
	1898-99	6.27	1.21	...	7.48	
Ludhiána	1896-97	1.95	2.20	1.32	2.83	
	1897-98	2.83	2.03	0.41	4.45	
	1898-99	4.45	...	0.42	4.03	
Ráwalpindi	1896-97	14.21	Nil.	Nil.	14.21	
	1897-98	14.21	...	...	14.21	
	1898-99	14.21	...	...	14.21	
Do. Municipality ...	1896-97	1.68	Nil.	Nil.	1.68	
	1897-98	1.68	0.01	...	1.69	
	1898-99	1.69	...	...	1.69	
Gujrát	1896-97	2.21	0.68	0.21	2.68	
	1897-98	2.68	...	0.35	2.33	
	1898-99	2.33	0.09	0.23	2.19	
Do. Municipality ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98	Nil.	Nil.	Nil.	Nil.	
	1898-99	Nil.	Nil.	Nil.	Nil.	
Gurdáspur	1896-97	3.22	0.35	...	3.57	
	1897-98	3.57	0.38	...	3.95	
	1898-99	3.95	...	...	3.95	
Umballa	1896-97	2.07	0.04	0.64	1.47	f 0.20 of an acre in column 5 includes 0.04 acre transferred to the Karnál District.
	1897-98	1.47	0.53	f 0.20	1.80	
	1898-99	1.80	0.15	g 0.33	1.62	g 0.33 of an acre in column 5 includes 0.03 acre transferred to groves.
Siálkot	1896-97	6.79	2.41	1.40	7.80	
	1897-98	7.80	1.53	0.22	9.11	
	1898-99	9.11	0.58	0.51	9.18	
Hoshiárpur	1896-97	5.98	...	...	5.98	
	1897-98	5.98	...	...	5.98	
	1898-99	5.98	3.50	...	9.48	
Simla	1896-97	8.00	...	...	8.00	
	1897-98	8.00	...	...	8.00	
	1898-99	8.00	...	...	8.00	
Hazára	1896-97	15.39	0.06	0.06	15.39	
	1897-98	15.39	...	...	15.39	
	1898-99	15.39	...	...	15.39	
Kángra	1896-97	3.52	0.10	0.62	3.00	
	1897-98	3.00	0.10	0.72	2.38	
	1898-99	2.38	0.03	0.03	2.38	
Do. Municipality ...	1896-97	5.67	2.50	1.10	7.07	
	1897-98	7.07	3.10	...	10.17	
	1898-99	10.17	2.40	2.15	10.42	
Total	1896-97	620.89	27.89	47.16	601.62	
	1897-98	601.62	24.46	46.38	579.70	
	1898-99	579.70	50.26	35.47	594.49	

STATEMENT No. II—continued.

Progress Statement of Nurseries in the Canal Divisions for the year 1896-97 to 1898-99.

I		2	3	4	5	6	7
DIVISION.		Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
			Acres.	Acres.	Acres.	Acres.	
Bári Doáb Canal, 1st Division	...	1896-97	Nil.	Nil.	Nil.	Nil.	
		1897-98					
		1898-99					
Ditto, 2nd Division	...	1896-97	Nil.	Nil.	Nil.	Nil.	
		1897-98					
		1898-99					
Ditto, 3rd Division	...	1896-97	...	...	...	...	
		1897-98					
		1898-99		0·60	...	0·60	
Upper Sutlej Division, Inundation Canals.	...	1896-97	...	...	...	...	
		1897-98		0·27	...	0·27	
		1898-99		0·27	0·10	0·01	0·36
Mooltan Canals Division	...	1896-97	16·73	4·09	2·17	18·65	
		1897-98	18·65	0·29	0·08	18·77	
		1898-99	18·77	...	8·03	10·74	
Dera Ghāzi Khan Division, Indus Canals.	...	1896-97	...	...	...	...	
		1897-98					
		1898-99		3·25	...	3·25	
Muzaffargarh Canals Division	...	1896-97	0·11	...	a 0·11	...	a Transferred to Plantations.
		1897-98	...	...	...	...	
		1898-99	...	...	...	...	
Western Jumna Canal, Karnál Division.	...	1896-97	4·09	1·54	2·82	2·81	
		1897-98	2·81	1·55	b 1·05	3·31	
		1898-99	3·31	1·58	c 2·22	2·67	
Jhind Independent Sub-Division	...	1898-99	...	d 0·27	...	0·27	c 2·22 acres include 0·27 of an acre transferred to Jhind Independent Sub-Division.
Western Jumna Canal, Delhi Division	...	1896-97	2·82	1·97	2·37	2·42	d 0·27 of an acre received in transfer from Karnál Division.
		1897-98	2·42	2·71	1·58	3·55	
		1898-99	3·55	...	0·36	3·19	
Ditto, Hissár Division	...	1896-97	9·15	2·00	3·23	7·92	e 4·56 acres include 0·15 of an acre received by transfer from Karnál Division.
		1897-98	7·92	e 4·56	2·22	10·26	
		1898-99	10·26	1·04	5·09	6·21	
Sirhind Canal, Ferozpur Division	...	1896-97	2·43	2·62	1·73	3·32	
		1897-98	3·32	...	0·70	2·62	
		1898-99	2·62	...	0·92	1·70	
Ditto, Ludhiāna Division	...	1896-97	13·38	2·80	4·73	11·45	
		1897-98	11·45	3·44	2·49	12·40	
		1898-99	12·40	1·16	3·06	10·50	

STATEMENT No. II—continued.

1	2	3	4	5	6	7
DIVISION.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Sirhind Canal, Patiala Division ...	1896-97	6.78	0.42	f 0.40	6.80	f 0.40 of an acre transferred to Plantations.
	1897-98	6.80	0.48	g 4.40	2.88	g 4.40 acres transferred to Plantations.
	1898-99	2.88	1.22	1.12	2.98	
Chenáb Canal, 1st Division ...	1896-97	4.94	1.92	h 0.35	6.51	h 0.35 of an acre transferred to Plantations.
	1897-98	6.51	0.30	i 4.59	2.22	i 4.59 acres transferred to Plantations.
	1898-99	2.22	...	1.50	0.72	
Ditto, 2nd Division ...	1896-97	1.85	1.00	j 2.85	...	j 2.85 acres transferred to Plantations.
	1897-98	...	15.88	11.14	4.69	
	1898-99	4.69	6.00	6.13	4.56	
Ditto, 3rd Division ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98					
	1898-99					
Ditto, 4th Division ...	1896-97	2.68	2.00	...	4.68	k 7.27 acres include 3 acres transferred to Plantations. l 0.40 of an acre due to correction of previous errors.
	1897-98	4.68	3.04	k 7.27	0.45	
	1898-99	0.45	1.10	l 0.40	1.15	
Ditto, 5th Division ...	1896-97	...	...	...	...	
	1897-98	...	...	...	...	
	1898-99	...	0.07	...	0.07	
Swát River Canals Division ...	1896-97	0.49	...	m 0.49	...	m 0.49 of an acre transferred to Plantations.
	1897-98	...	1.00	...	1.00	
	1898-99	1.00	0.07	...	1.07	
Jhelum Canals, 1st Division ...	1896-97	...	...	...	...	
	1897-98	...	...	...	...	
	1898-99	...	2.00	...	2.00	
Ditto, 2nd Division ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98					
	1898-99					
Ditto, 3rd Division ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98					
	1898-99					
Sutlej Independent Sub-Division ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98					
	1898-99					
Sirsa Independent Sub-Division, Ghaggar Canals.	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98					
	1898-99					
Total ...	1896-97	65.45	20.36	21.25	64.56	
	1897-98	64.56	33.38	35.52	62.42	
	1898-99	62.42	18.46	28.84	52.04	

STATEMENT No. II—concluded.

Progress Statement of Nurseries in the Provincial Divisions for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7
DIVISION.	Year.	Area under nurseries at beginning of the year.	Area added during the year.	Area given up or transferred to groves during the year.	Area remaining at end of the year.	REMARKS.
		Acre.	Acre.	Acre.	Acre.	
Pesháwar Division	1896-97 1897-98 1898-99	1·99 1·02 0·82	0·51 0·31 0·13	a 1·48 b 0·51 c 0·95	1·02 0·82 ...	a 1·48 acres include 0·98 of an acre transferred to Hazára Division. b 0·51 of an acre includes 0·10 due to correction of last year's figures. c 0·95 of an acre includes 0·92 transferred to Hazára Division, as Pesháwar Division has become Sub-Division of Hazára Division.
Hazára Division	1896-97 1897-98 1898-99	... 0·88 0·87	d 1·36 0·02 e 0·96	0·48 0·03 0·02	0·88 0·87 1·81	d 1·36 acres include 0·98 of an acre received by transfer from Pesháwar Division. e 0·96 of an acre includes 0·92 received in transfer owing to the amalgamation of the Pesháwar with the Hazára Provincial Division. f 0·29 of an acre due to correction of area in the previous returns.
Ráwalpindi Division	1896-97 1897-98 1898-99	1·75 1·65 1·65	... ... ...	0·10 ... 0·30	1·65 1·65 1·35	g 0·43 of an acre includes 0·15 received by transfer from late Ferozpur Independent Executive charge.
Kohát North-West Frontier Road Division.	1896-97 1897-98 1898-99	0·46 0·31 0·11	0·07 ... 0·18	0·22 0·20 0·17	0·31 0·11 0·12	h 0·15 acre transferred to Ludhiána Division and 0·67 acre to Lahore Division.
Gujránwála Independent Sub-Division	1896-97 1897-98 1898-99	0·92 0·80 0·45	 f 0·29	0·12 0·35 ...	0·80 0·45 0·74	i 1·28 acres include 0·58 of an acre due to correction of previous errors. 0·59 of an acre in column 5 transferred to Amritsar Independent Executive charge.
Ludhiána Division	1896-97 1897-98 1898-99	1·88 0·20 0·20	0·01 0·02 g 0·43	1·69 0·02 0·08	0·20 0·20 0·55	j 0·36 of an acre includes 0·34 transferred to groves.
Ferozpur Independent Executive charge.	1896-97 1897-98 1898-99	1·57 0·82 0·82	... 0·10 ...	0·75 0·10 h 0·82	0·82 0·82 ...	k 1·27 acres received by transfer from Mooltan Division.
Sirala Division	1896-97 1897-98 1898-99	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	l 1·28 acres include 0·58 of an acre due to correction of previous errors. 0·59 of an acre in column 5 transferred to Amritsar Independent Executive charge.
Umballa Division	1896-97 1897-98 1898-99	0·96 0·79 0·82	0·03 0·33 i 0·29	0·20 0·30 0·35	0·79 0·82 0·76	m 1·76 acres include 0·59 of an acre received by transfer from the late Independent Executive charge, Amritsar. 3·87 acres include 3·68 acres transferred to groves.
Delhi Division	1896-97 1897-98 1898-99	... 0·45 0·45	0·45 ... ...	... ... ...	0·45 0·45 0·45	n 2·90 acres include 0·67 of an acre received by transfer from late Ferozpur Independent Executive charge.
Dera Ismaíl Khan Division	1896-97 1897-98 1898-99	0·41 0·75 0·66	0·42 0·02 0·01	0·08 0·11 j 0·36	0·75 0·66 0·31	o 0·59 of an acre received by transfer from Lahore Division.
Dera Gházi Khan Division	1896-97 1897-98 1898-99	0·05 0·05 0·05	 k 1·27	 0·05	0·05 0·05 1·27	p 0·59 of an acre transferred to Lahore Division.
Lahore Division	1896-97 1897-98 1898-99	4·76 5·45 3·34	l 1·28 m 1·76 n 2·90	l 0·59 m 3·87 0·28	5·45 3·34 5·96	q Transferred to Dera Gházi Khan Division.
Amritsar Division	1896-97 1897-98 1898-99	... 0·59 ...	o 0·59	... p 0·59 ...	0·59	
Mooltan Division	1896-97 1897-98 1898-99	1·27 1·27 1·27	... ... ...	... ... q 1·27	1·27 1·27 ...	
Tochi Independent Executive charge	1896-97 1897-98 1898-99	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	
Total	1896-97 1897-98 1898-99	16·02 15·03 11·51	4·72 2·56 6·46	5·71 6·08 4·65	15·03 11·51 13·32	

STATEMENT No. III.

Progress Statement of Plantations in the Districts for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	Acres.	
Muzaffargarh ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Mooltan ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Dera Gházi Khan	1896-97 1897-98 1898-99	1,677·00 1,677·00 1,677·00	60·00 60·00 60·00	... ... ...	... ... ...	60·00 60·00 60·00	
Dera Ismail Khan	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Montgomery ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Jhang ...	1896-97 1897-98 1898-99	244·29 244·29 244·29	244·29 244·29 244·29	... ... ...	... ... ...	244·29 244·29 244·29	
Bannu ...	1896-97 1897-98 1898-99	1,424·78 1,412·04 2,320·58	1,192·66 1,192·66 1,148·36	 210·18	... a 44·30 b 847·37	1,192·66 1,148·36 511·17	a 44·30 acres include 12·74 acres transferred to groves b 847·37 acres due to correction of previous returns.
Sháhpur ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Hissár ...	1896-97 1897-98 1898-99	139·66 139·66 139·66	118·23 83·23 83·23	... ... ...	35·00	83·23 83·23 83·23	
Ferozpur ...	1896-97 1897-98 1898-99	 423·00	... ... ...	... ... c 233·00	 3·00	 230·00	c 233 acres include 213 acres omitted in previous returns.
Pesháwar ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Kohát ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Rohtak ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Lahore ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Karnál ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Jhelum ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Gujráwála ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Gurgáon ...	1896-97 1897-98 1898-99	1,834·09 1,670·59 1,670·59	114·81 44·81 44·81	... ... ...	d 70·00	44·81 44·81 44·81	d 70 acres were restored to the owners, as the expenditure was found to be more than income realized.

STATEMENT No. III—continued.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	Acres.	
Amritsar ...	{ 1896-97 1897-98 1898-99 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Do. Municipality.	{ 1896-97 1897-98 1898-99 }	7·00 7·00 7·00	7·00 7·00 7·00	... ... ...	... ... 6·00	7·00 7·00 1·00	
Delhi ...	{ 1896-97 1897-98 1898-99 }	917·65 1,644·55 880·65	576·39 576·39 579·96	1·66 3·66 ...	1·66 0·09 18·30	576·39 579·96 561·66	
Do. Municipality	{ 1896-97 1897-98 1898-99 }	938·73 938·73 938·73	938·73 938·73 938·73	... ... ...	... ... ...	938·73 938·73 938·73	
Jullundur ...	{ 1896-97 1897-98 1898-99 }	81·43 73·43 101·61	81·43 73·43 101·61	... 28·18 ...	8·00	73·43 101·61 101·61	
Ludhiāna ...	{ 1896-97 1897-98 1898-99 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Rāwalpindi ...	{ 1896-97 1897-98 1898-99 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Gujrāt ...	{ 1896-97 1897-98 1898-99 }	0·58 0·59 0·59	0·58 0·59 0·59	0·04	0·03 ... 0·01	0·59 0·59 0·58	
Gurdāspur ...	{ 1896-97 1897-98 1898-99 }	25·65 25·15 25·40	25·65 25·15 25·40	... 0·50 0·60	0·50 0·25 0·20	25·15 25·40 25·80	
Umballa ...	{ 1896-97 1897-98 1898-99 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Siālkot ...	{ 1896-97 1897-98 1898-99 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Do. Municipality.	{ 1896-97 1897-98 1898-99 }	2·00 2·00 2·00	2·00 2·00 2·00	... ... ...	... ... ...	2·00 2·00 2·00	
Hoshiārpur ...	{ 1896-97 1897-98 1898-99 }	Nil.	Nil.	Nil.	Nil.	Nil.	
Simla ...	{ 1896-97 1897-98 1898-99 }	57·50 57·50 57·50	57·50 57·50 57·50	... ... ...	... ... ...	57·50 57·50 57·50	
Hazāra ...	{ 1896-97 1897-98 1898-99 }	41·63 41·63 41·63	29·62 29·62 29·62	... ... ...	... ... ...	29·62 29·62 29·62	
Kāngra Municipality.	{ 1896-97 1897-98 1898-99 }	81·33 95·40 195·50	63·73 71·06 79·23	17·60 24·34 70·27	10·27 16·17 27·20	71·06 79·23 122·30	
Total ...	{ 1896-97 1897-98 1898-99 }	7,473·32 8,029·66 8,725·73	3,512·62 3,406·46 3,402·33	19·30 56·68 514·05	125·46 60·81 902·08	3,406·46 3,402·33 3,014·30	

STATEMENT No. III.—continued.

Progress Statement of Plantations in the Canal Divisions for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8
Division.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		Acre.	Acre.	Acre.	Acre.	Acre.	
Bári Doáb Canal, 1st Division.	1896-97	3,564·00	1,924·74	20·50	...	1,945·24	a 3·44 acres came under silting operations.
	1897-98	3,564·00	1,945·24	32·41	...	1,977·65	b 48·71 acres are entered in column 3, as the figure (45·59) in the annual statement has been found out to be incorrect.
	1898-99	3,564·00	1,977·65	64·80	...	2,042·45	c 189·86 acres are entered in column 3 as the figure (118·50) in the annual statement has been found out to be incorrect.
Bári Doáb Canal, 2nd Division.	1896-97	1,428·31	1,428·31	8·75	...	1,437·06	d 76·64 acres include 76·36 acres transferred to the Sutlej Independent Sub-Division.
	1897-98	1,437·06	1,437·06	...	...	1,437·06	e 1·04 acres include 1 acre transferred to the Sutlej Independent Sub-Division.
	1898-99	1,437·06	1,437·06	4·00	...	1,441·06	f 2 acres taken up for making embankments of protective works.
Bári Doáb Canal, 3rd Division.	1896-97	988·35	965·35	23·00	30·10	958·25	g 0·11 of an acre received by transfer from nurseries.
	1897-98	1,006·20	958·25	47·95	a 3·44	1,002·76	h 16·80 acres include 15 acres due to correction of previous errors.
	1898-99	1,070·76	1,002·76	68·00	23·50	1,047·26	i 99·55 acres in column 5 and 130·02 acres in column 6 include 92 acres transferred from Sirsa Branch to Main Canal.
Upper Sutlej Division, Irrigation Canals.	1896-97	b 48·71	45·59	3·12	...	48·71	j 130·02 acres include 38·02 acres due to corrections of previous returns.
	1897-98	51·26	48·71	2·55	...	51·26	k 1·91 acres include 1·88 acres due to correction of previous returns.
	1898-99	51·26	51·26	...	...	51·26	l 60·28 acres include 60·26 acres received in transfer from Delhi Division.
Mooltan Canals Division.	1896-97	c 189·86	173·97	4·95	d 76·64	102·28	m 0·25 of an acre transferred to Jhind Independent Sub-Division.
	1897-98	118·17	102·28	1·21	e 1·04	102·45	n 0·25 of an acre received in transfer from Karnál Division.
	1898-99	118·34	102·45	8·00	2·00	108·45	o 5·56 acres include 0·06 of an acre due to correction of previous returns.
Dera Ghāzī Khan Division, Indus Canals.	1896-97	20·68	20·68	...	...	20·68	p 168·24 acres include 77·35 acres of the old Delhi Canal surrendered to the villagers.
	1897-98	20·68	20·68	...	f 2·00	18·68	q 64·16 acres include 60·26 acres of the old Hansi Canal transferred to the Karnál Division.
	1898-99	18·68	18·68	...	4·31	14·37	r 21·90 acres include 0·40 of an acre received by transfer from nurseries.
Muzaffargarh Canals Division.	1896-97	0·85	0·85	g 0·11	...	0·96	s 77·90 acres include 4·40 acres received by transfer from nurseries.
	1897-98	0·96	0·96	h 16·80	...	17·76	
	1898-99	17·76	17·76	...	...	17·76	
Western Jumna Canal, Karnál Division.	1896-97	1,103·72	991·73	i 99·55	j 130·02	961·26	
	1897-98	1,104·47	961·26	k 1·91	4·00	959·17	
	1898-99	1,164·73	959·17	l 60·28	m 0·25	1,019·20	
Jhind Independent Sub-Division.	1898-99	...	...	n 0·25	...	0·25	
Western Jumna Canal, Delhi Division.	1896-97	1,581·05	1,364·45	o 5·56	0·25	1,369·76	
	1897-98	1,581·05	1,369·76	130·11	p 168·24	1,331·63	
	1898-99	1,503·43	1,331·63	...	q 64·16	1,267·47	
Western Jumna Canal, Hissár Division.	1896-97	233·50	125·80	75·40	15·00	186·20	
	1897-98	186·20	186·20	5·00	6·10	185·10	
	1898-99	185·10	185·10	118·05	115·40	187·75	
Sirhind Canal, Firozpur Division.	1896-97	4,117·68	2,275·97	62·85	1·42	2,337·40	
	1897-98	4,117·68	2,337·40	27·54	...	2,364·94	
	1898-99	4,117·68	2,364·94	93·53	...	2,458·47	
Sirhind Canal, Ludhiana Division.	1896-97	6,608·00	4,540·05	33·98	1·00	4,573·03	
	1897-98	6,608·00	4,573·03	15·74	9·71	4,579·06	
	1898-99	6,608·00	4,579·06	142·82	2·30	4,719·58	
Sirhind Canal, Patiala Division.	1896-97	3,918·48	2,538·19	r 21·90	16·50	2,543·59	
	1897-98	3,918·48	2,543·59	s 77·90	0·50	2,620·49	
	1898-99	3,918·48	2,620·99	50·00	40·00	2,630·99	

STATEMENT NO. III—continued.

1	2	3	4	5	6	7	8
Division.	Year.	Area taken up for plan- tation at the begin- ning of the year.	Area successfully stock- ed at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>	
Chenáb Canal, 1st Division.	1896-97 1897-98 1898-99	398·35 400·00 1,046·98	635·20 635·43 758·02	t 200·35 u 180·59 236·48	200·12 58·00 108·58	635·43 758·02 885·92	t 200·35 acres include 0·35 of an acre received by transfer from nurseries. u 180·59 acres include 4·59 acres received by trans- fer from nurseries.
Chenáb Canal, 2nd Division.	1896-97 1897-98 1898-99	219·13 383·79 411·87	219·13 319·51 353·22	v 122·73 41·93 20·23	22·35 8·22 3·79	319·51 353·22 369·66	v 122·73 acres include 2·85 acres received by trans- fer from nurseries. w 52·72 acres include 3 acres received by transfer from nurseries.
Chenáb Canal, 3rd Division.	1896-97 1897-98 1898-99	... ... ...	... ... ...	... ... 150·92	 142·32	 8·60	x 0·50 of an acre due to correction of previous errors.
Chenáb Canal, 4th Division.	1896-97 1897-98 1898-99	24·52 73·74 88·37	24·52 24·52 76·74	... w 52·72 21·73	... x 0·50 ...	24·52 76·74 98·47	y 4·28 acres include 0·49 of an acre received by transfer from nurseries. z 76·36 acres have been struck off from column 3 opposite 1896-97, and shown in Mooltan Canals Division as they were erroneously entered in this Division in the Annual Statement.
Chenáb Canal, 5th Division.	1896-97 1897-98 1898-99	... 57·28 282·65	 57·28	... 57·28 236·06	 109·04	... 57·28 184·30	* 83·31 acres include 76·36 acres received by trans- fer from Mooltan Canals Division.
Swát River Canals Division.	1896-97 1897-98 1898-99	119·43 122·71 122·15	119·43 122·71 122·15	y 4·28 0·75 3·63	1·00 1·31 ...	122·71 122·15 125·78	† 1 acre received by trans- fer from Mooltan Canals Division.
Jhelum Canals, 1st Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	‡ 2·95 acres due to correc- tion of previous returns. § 15·50 acres due to correc- tion of previous errors.
Jhelum Canals, 2nd Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Jhelum Canals, 3rd Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Sutlej Indepen- dent Sub-Divi- sion.	1896-97 1897-98 1898-99	z ... 83·31 84·31	... 83·31 81·36	* 83·31 † 1·00 ...	... ‡ 2·95 § 15·50	83·31 81·36 65·86	
Sirsa Independent Sub-Division, Ghaggar Canals	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Total ...	1896-97 1897-98 1898-99	24,564·62 24,835·04 25,811·61	17,393·96 17,669·90 18,097·28	770·34 693·39 1,278·78	494·40 266·01 631·15	17,669·90 18,097·28 18,744·91	

STATEMENT No. III—concluded.

Progress Statement of Plantations in the Provincial Divisions for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8
Division.	Year.	Area taken up for plantation at the beginning of the year.	Area successfully stocked at beginning of year.	Area sown or planted during the year.	Area of failures during the year.	Area stocked at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	Acres.	
Pesháwar Division	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	Becomes Sub-Division of Hazára Provincial Division.
Hazára Division	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Ráwalpindi Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Kohát North-West Frontier Road Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Gujránwála Independent Sub-Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Ludhiána Division	1896-97 1897-98 1898-99	 0·60	 0·60	... 3·14 3·30	... 2·54 3·35	... 0·60 0·55	Amalgamated with Ludhiána and Lahore Divisions.
Ferozpur Independent Executive charge.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Simla Division ...	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Umbálla Division	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Delhi Division ..	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Dera Isma'íl Khan Division.	1896-97 1897-98 1898-99	208·46 208·46 207·26	156·18 156·67 156·70	0·53 0·50 0·77	0·04 0·47 0·09	156·67 156·70 157·38	0·47 of an acre in column 6 transferred to groves.
Dera Gházi Khan Division.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Lahore Division	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Amritsar Division	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Mooltán Division	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Tochi Independent Executive charge.	1896-97 1897-98 1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	Amalgamated with Dera Gházi Khan Division. during 1898-99.
Total ...	1896-97 1897-98 1898-99	208·46 208·46 208·56	156·18 156·67 157·30	0·53 3·64 4·07	0·04 3·01 3·44	156·67 157·30 157·93	

STATEMENT No. IV.

Progress Statement of Groves in the Districts for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Muzaffargarh ...	1896-97	235.27	...	...	235.27	
	1897-98	235.27	...	0.42	234.85	
	1898-99	234.85	8.00	...	242.85	
Mooltan ...	1896-97	21.38	...	...	21.38	
	1897-98	21.38	...	...	21.38	
	1898-99	21.38	...	15.15	6.23	15.15 acres of land were sold during 1898-99, vide Punjab Government No. 951, dated 10th May 1898.
Dera Gházi Khan ...	1896-97	10.00	...	...	10.00	
	1897-98	10.00	...	...	10.00	
	1898-99	10.00	...	...	10.00	
Dera Ismaíl Khan ...	1896-97	12.60	...	...	12.60	
	1897-98	12.60	...	...	12.60	
	1898-99	12.60	...	...	12.60	
Montgomery ...	1896-97	746.00	...	...	746.00	
	1897-98	746.00	...	...	746.00	
	1898-99	746.00	...	...	746.00	
Jhang ...	1896-97	25.83	3.00	...	28.83	
	1897-98	28.83	9.40	...	38.23	
	1898-99	38.23	9.88	...	48.11	
„ Municipality ...	1896-97	4.09	...	...	4.09	
	1897-98	4.09	...	...	4.09	
	1898-99	4.09	...	...	4.09	
Bannu ...	1896-97	9.16	...	0.14	9.02	
	1897-98	9.02	12.74	...	21.76	12.74 acres received by transfer from Plantations.
	1898-99	21.76	0.01	0.13	21.64	
„ Municipality ...	1898-99	...	7.49	...	7.49	7.49 acres omitted in previous returns.
Sháhpur ...	1896-97	1,164.94	16.15	6.88	1,174.21	
	1897-98	1,174.21	5.19	...	1,179.31	
	1898-99	1,179.31	7.38	172.19	1,014.50	172.19 acres include 150.19 acres transferred to the Forest Department and 6.85 acres due to correction of area.
Hissár ...	1896-97	338.45	...	...	338.45	
	1897-98	338.45	...	...	338.45	
	1898-99	338.45	...	...	338.45	
„ Municipality ...	1896-97	8.37	...	...	8.37	
	1897-98	8.37	...	...	8.37	
	1898-99	8.37	...	...	8.37	
Ferozpur ...	1896-97	468.54	...	...	468.54	
	1897-98	468.54	3.00	0.50	471.04	
	1898-99	471.04	...	50.00	421.04	
Pesháwar ...	1896-97	20.65	0.37	...	21.02	
	1897-98	21.02	0.37	...	21.39	
	1898-99	21.39	0.37	...	21.76	
„ Municipality ...	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98	Nil.	Nil.	Nil.	Nil.	
	1898-99	Nil.	Nil.	Nil.	Nil.	

STATEMENT No. IV—continued.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Kohát	... { 1896-97 1897-98 1898-99	23·71 24·72 25·81	1·26 2·09 0·09	0·25 1·00 0·01	24·72 25·81 25·89	
Rohtak	... { 1896-97 1897-98 1898-99	543·94 543·94 543·94	... ... ...	... ... ...	543·94 543·94 543·94	
Lahore	... { 1896-97 1897-98 1898-99	16·73 16·73 16·73	... ... ...	... ... ...	16·73 16·73 16·73	
Karnál	... { 1896-97 1897-98 1898-99	317·37 317·37 318·03	... 0·66 ...	... ... ...	317·37 318·03 318·03	0·66 of an acre includes 0·04 received by transfer from nurseries and 0·62 due to correction of previous returns.
Jhelum	... { 1896-97 1897-98 1898-99	5·62 5·62 5·62	... ... ...	... ... ...	5·62 5·62 5·62	
Gujránwála	... { 1896-97 1897-98 1898-99	1·51 1·51 1·51	... ... ...	... ... ...	1·51 1·51 1·51	
Gurgáon	... { 1896-97 1897-98 1898-99	285·39 285·39 282·02	... ... ...	... 3·37 0	285·39 282·02 282·02	Trees on area in column 5 were sold during 1897-98.
Amritsar	... { 1896-97 1897-98 1898-99	3·37 46·47 46·47	43·10	 0·10	46·47 46·47 46·37	43·10 acres include 33·02 acres received by transfer from nurseries and 10·08 acres due to correction of previous returns.
„ Municipality	{ 1896-97 1897-98 1898-99	Nil.	Nil. 1·75 ...	Nil.	Nil. 1·75 ...	
Delhi	... { 1896-97 1897-98 1898-99	16·51 16·53 16·63	0·10 0·10 ...	0·08 ... 0·40	16·53 16·63 16·23	0·10 of an acre includes 0·03 of an acre received by transfer from nurseries during 1897-98.
„ Municipality	{ 1896-97 1897-98 1898-99	1·50 1·50 1·50	... ... ...	... ... ...	1·50 1·50 1·50	
Jullundur	... { 1896-97 1897-98 1898-99	10·76 13·69 13·69	3·78 ... 11·99	0·85	13·69 13·69 25·68	3·78 acres include 2·69 acres received by transfer from nurseries. The entry in column 5 is due to correction of previous returns.
Ludhiána	... { 1896-97 1897-98 1898-99	461·65 363·66 364·91	2·57 1·25 0·25	100·56 ... 177·46	363·66 364·91 187·70	The entry of 100·56 acres in column 5 is due to the fact that certain plots of land having been found quite unprofitable as groves were cleaned and leased out to cultivators.
Ráwalpindi	... { 1896-97 1897-98 1898-99	359·95 359·95 360·15	... 0·20 ...	... ... ...	359·95 360·15 360·15	177·46 acres in column 5 represent area of chunkís on which trees have been cut down and which has been leased for cultivation.
„ Municipality	{ 1896-97 1897-98 1898-99	20·21 20·21 20·21	... ... ...	... ... 5·00	20·21 20·21 15·21	

STATEMENT No. IV—continued.

1	2	3	4	5	6	7
DISTRICT.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Gujrāt	1896-97	176.82	0.35	0.26	176.91	
	1897-98	176.91	0.01	0.23	176.69	
	1898-99	176.69	15.40	5.00	187.09	
" Municipality	1896-97	3.53	...	...	3.53	
	1897-98	3.53	...	...	3.53	
	1898-99	3.53	...	0.01	3.52	
Gurdāspur	1896-97	8.15	7.80	0.06	15.89	
	1897-98	15.89	...	...	15.89	
	1898-99	15.89	...	...	15.89	
Umballa	1896-97	18.94	0.15	0.09	19.00	
	1897-98	19.00	...	...	19.00	
	1898-99	19.00	1.31	2.06	18.25	1.31 acres in column 4 include 0.03 of an acre received by transfer from nurseries and 1.28 acres due to correction of previous returns.
Siālkot	1896-97	14.67	0.08	0.62	14.13	
	1897-98	14.13	0.06	0.50	13.69	
	1898-99	13.69	0.52	0.03	14.18	
Hoshiārpur	1896-97	15.23	...	...	15.23	
	1897-98	15.23	...	...	15.23	
	1898-99	15.23	...	...	15.23	
Simla	1896-97	13.62	...	...	13.62	
	1897-98	13.62	...	...	13.62	
	1898-99	13.62	...	...	13.62	
Hazāra	1896-97	34.65	...	...	34.65	
	1897-98	34.65	...	...	34.65	
	1898-99	34.65	...	...	34.65	
Kāngra	1896-97	78.28	...	...	78.28	
	1897-98	78.28	...	...	78.28	
	1898-99	78.28	...	...	78.28	
" Municipality	1896-97	Nil.	Nil.	Nil.	Nil.	
	1897-98	Nil.	Nil.	Nil.	Nil.	
	1898-99	Nil.	Nil.	Nil.	Nil.	
Total	1896-97	5,497.39	78.71	109.79	5,466.31	
	1897-98	5,466.31	34.98	6.02	5,495.27	
	1898-99	5,495.27	64.44	427.54	5,132.17	

STATEMENT No. IV—concluded.

Progress Statement of Groves in the Provincial Divisions for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7
DIVISION.	Year.	Area of groves at the beginning of the year.	Area planted or transferred from nurseries during the year.	Area of failures during the year.	Area stocked with trees or plants alive at end of the year.	REMARKS.
		Acres.	Acres.	Acres.	Acres.	
Peshāwar Division	{ 1896-97 1897-98 1898-99	{ 127·38 127·38 127·38	{ b 0·58	{ a 127·96	{ 127·38 127·38 ...	a Transferred to Hazāra Division owing to Peshāwar Division having been made as Sub-Division of Hazāra Division.
Hazāra Division ...	{ 1896-97 1897-98 1898-99	{	{ c 127·96	{	{ 127·96	b 0·58 of an acre includes 0·55 due to correction of previous errors. c 127·96 acres received by transfer from Peshāwar Division.
Rāwalpindi Division	{ 1896-97 1897-98 1898-99	{ 217·27 217·27 217·27	{	{	{ 217·27 217·27 217·27	
Kohāt North-West Frontier Road Division.	{ 1896-97 1897-98 1898-99	{ 1·83 1·83 1·58	{	{ 0·25	{ 1·83 1·58 1·58	
Gujranwāla Independent Sub-Division.	{ 1896-97 1897-98 1898-99	{ 260·13 260·13 260·13	{ d 8·52	{	{ 260·13 260·13 268·65	d 8·52 acres due to correction of previous errors.
Ludhiāna Division	{ 1896-97 1897-98 1898-99	{ 5·25 5·25 5·25	{ e 38·63	{	{ 5·25 5·25 43·88	e 38·63 acres include 38·13 acres received by transfer from late Ferozpur Independent Executive charge.
Ferozpur Independent Executive charge.	{ 1896-97 1897-98 1898-99	{ 496·41 497·16 497·26	{ 0·75 0·10 ...	{ f 497·26	{ 497·16 497·26 ...	f 38·13 acres transferred to Ludhiāna Division and 459·13 to Lahore Division.
Simla Division ...	{ 1896-97 1897-98 1898-99	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	
Umballa Division ...	{ 1896-97 1897-98 1898-99	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	
Delhi Division ...	{ 1896-97 1897-98 1898-99	{ 4·84 4·84 ...	{	{ 4·84	{ 4·84	
D. I. Khān Division	{ 1896-97 1897-98 1898-99	{ 16·46 16·41 17·07	{ 0·08 g 0·89 h 0·34	{ 0·13 0·23 0·66	{ 16·41 17·07 16·75	g 0·89 acre includes 0·47 of an acre received by transfer from Plantations. h 0·34 of an acre received by transfer from nurseries.
D. G. Khān Division	{ 1896-97 1897-98 1898-99	{ 2·99 2·96 2·96	{ i 1·70	{ 0·03	{ 2·96 2·96 4·66	i 1·70 acres received by transfer from Mooltan Division.
Lahore Division ...	{ 1896-97 1897-98 1898-99	{ 21·92 15·42 19·10	{ ... j 3·68 k 459·41	{ 6·50	{ 15·42 19·10 478·51	j 3·68 acres received by transfer from nurseries. k 459·41 acres include 459·13 acres received by transfer from late Ferozpur Independent Executive charge.
Amritsar Division	{ 1896-97 1897-98 1898-99	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	
Mooltan Division ...	{ 1896-97 1897-98 1898-99	{ 1·70 1·70 1·70	{	{ l 1·70	{ 1·70 1·70 ...	l 1·70 acres transferred to D. G. Khān Division.
Tochi Independent Executive charge.	{ 1896-97 1897-98 1898-99	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	{ Nil. Nil. Nil.	
Total ...	{ 1896-97 1897-98 1898-99	{ 1,156·18 1,150·35 1,149·70	{ 0·83 4·67 637·14	{ 6·66 5·32 627·58	{ 1,150·35 1,149·70 1,159·26	

STATEMENT No. V.

Progress Statement of Avenues in the Districts for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Muzaffargarh ...	1896-97	295·85	120·00	1·00	...	121·00	
	1897-98	295·85	121·00	...	0·30	120·70	
	1898-99	295·85	120·70	...	...	120·70	
Mooltán ...	1896-97	1,249·00	222·75	17·57	5·95	234·37	
	1897-98	1,236·57	234·37	11·24	11·76	233·85	
	1898-99	1,257·57	233·85	10·88	10·80	233·93	
D. G. Khan ...	1896-97	114·00	35·00	...	...	35·00	
	1897-98	114·00	35·00	...	...	35·00	
	1898-99	110·00	35·00	...	...	35·00	
D. I. Khan ...	1896-97	190·00	49·75	0·37	0·62	49·50	
	1897-98	190·00	49·50	1·38	5·13	45·75	
	1898-99	190·00	45·75	0·75	0·90	45·60	
Montgomery ...	1896-97	250·00	132·00	2·00	1·00	133·00	
	1897-98	250·00	133·00	...	...	133·00	
	1898-99	250·00	133·00	...	...	133·00	
Jhang ...	1896-97	323·49	33·35	46·91	11·00	69·28	
	1897-98	323·49	69·26	14·25	14·41	69·10	
	1898-99	323·49	69·10	10·75	5·25	74·60	
„ Municipality	1896-97	48·09	21·82	...	...	21·82	
	1897-98	48·09	21·82	...	...	21·82	
	1898-99	48·09	21·82	1·00	1·00	21·82	
Bannu ...	1896-97	147·29	68·78	2·61	5·79	65·60	
	1897-98	147·29	65·60	1·88	0·62	66·86	
	1898-99	147·29	66·86	2·51	0·25	69·12	
„ Municipality	1898-99	2·32	...	1·26	0·04	1·22	
Shahpur ...	1896-97	546·12	511·60	13·88	8·50	516·98	
	1897-98	546·12	516·98	16·32	1·06	532·24	
	1898-99	541·12	532·24	9·01	12·54	528·71	
„ Municipality	1896-97	11·22	15·37	0·21	...	15·58	
	1897-98	11·22	15·58	1·04	...	16·62	
	1898-99	11·22	16·62	0·27	...	16·89	
Hissár ..	1896-97	393·81	103·05	...	...	103·05	
	1897-98	393·81	103·05	...	...	103·05	
	1898-99	393·81	103·05	...	...	103·05	
„ Municipality	1896-97	5·59	5·21	...	...	5·21	
	1897-98	5·59	5·21	...	...	5·21	
	1898-99	5·59	5·21	...	...	5·21	
Ferozpur ...	1896-97	731·75	521·00	...	...	521·00	731·75 have been entered in column 3 opposite 1896-97, as 731 shown in the annual statement has been found out to be incorrect.
	1897-98	731·75	521·00	3·00	...	524·00	
	1898-99	731·75	524·00	2·00	...	526·00	
Pesháwar ...	1896-97	570·94	455·80	32·00	13·00	474·80	
	1897-98	570·94	474·80	35·00	17·07	492·73	
	1898-99	600·95	492·73	117·00	12·00	597·73	

STATEMENT No. V—continued.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Peshāwar Municipality.	1896-97	5.50	5.50	...	...	5.50	
	1897-98	5.50	5.50	...	...	5.50	
	1898-99	5.50	5.50	...	...	5.50	
Kohat ...	1896-97	14.32	10.29	0.64	0.64	10.29	
	1897-98	14.32	10.29	2.75	1.00	12.04	
	1898-99	16.82	12.04	1.75	0.88	12.91	
Rohtak ...	1896-97	415.08	196.93	3.50	0.25	200.18	
	1897-98	415.08	200.18	2.00	1.00	201.18	
	1898-99	415.08	201.18	...	...	201.18	
Lahore ...	1896-97	413.41	229.69	0.94	0.69	229.94	
	1897-98	413.41	229.94	...	...	229.94	
	1898-99	413.41	229.94	...	...	229.94	
„ Municipality	1896-97	56.39	53.43	0.25	...	53.68	
	1897-98	56.39	53.68	...	...	53.68	
	1898-99	56.39	53.68	...	...	53.68	
Karnāl ...	1896-97	241.70	81.30	2.83	...	84.13	
	1897-98	312.70	84.13	29.60	1.00	112.73	
	1898-99	339.70	112.73	...	...	112.73	29.60 miles include 26.50 miles received by transfer from the Umballa District and 0.10 of a mile due to the correction of previous returns.
„ Municipality	1896-97	8.23	8.23	...	...	8.23	
	1897-98	8.23	8.23	...	...	8.23	
	1898-99	8.23	8.23	...	...	8.23	
Jhelum ...	1896-97	406.01	312.42	7.29	0.56	319.15	
	1897-98	440.01	319.15	12.00	3.07	328.08	
	1898-99	440.01	328.08	7.93	1.74	334.27	
„ Municipality	1896-97	16.52	18.48	0.30	0.06	18.72	
	1897-98	16.52	18.72	0.36	0.14	18.94	
	1898-99	16.52	18.94	0.67	0.21	19.40	
Gujránwāla ...	1896-97	521.13	164.99	11.53	1.51	175.01	
	1897-98	521.13	175.01	0.50	...	175.51	
	1898-99	521.13	175.51	1.50	...	177.01	
Gurgāon ...	1896-97	396.15	259.45	...	...	259.45	
	1897-98	396.15	259.45	...	...	259.45	
	1898-99	396.15	259.45	...	...	259.45	395.15 miles were erroneously shown in the annual statement for 1896-97 in place of 396.15 miles.
Amritsar ...	1896-97	278.98	172.51	16.03	12.31	176.23	
	1897-98	278.98	176.23	11.82	11.56	176.49	
	1898-99	278.98	176.49	12.71	11.92	177.28	
„ Municipality	1896-97	66.00	51.12	0.57	6.00	45.69	
	1897-98	66.00	45.69	11.36	11.36	45.69	
	1898-99	66.00	45.69	10.00	4.28	51.41	
Delhi ...	1896-97	349.05	151.23	21.79	21.74	151.28	
	1897-98	349.05	151.28	13.45	9.95	154.78	
	1898-99	349.05	154.78	14.50	7.85	161.43	
„ Municipality	1896-97	38.00	25.00	...	...	25.00	
	1897-98	38.00	25.00	...	...	25.00	
	1898-99	38.00	25.00	...	...	25.00	
Jullundur ...	1896-97	283.80	234.93	...	...	234.93	
	1897-98	283.80	234.93	...	...	234.93	
	1898-99	283.80	234.93	...	...	234.93	

STATEMENT No. V—continued.

1	2	3	4	5	6	7	8
DISTRICT.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Ludhiána	1896-97	157.75	121.50	23.50	10.00	135.00	23.50 miles include 15.00 miles due to correction of previous returns.
	1897-98	161.75	135.00	7.00	...	142.00	
	1898-99	291.81	142.00	57.81	...	199.81	
Ráwalpindi	1896-97	987.97	325.33	...	...	325.33	57.81 miles include 40.38 miles due to correction of previous returns.
	1897-98	987.97	325.33	...	...	325.33	
	1898-99	987.97	325.33	0.50	2.07	323.76	
Do. Municipality	1896-97	11.61	10.46	...	...	10.46	
	1897-98	11.61	10.46	...	...	10.46	
	1898-99	11.61	10.46	0.25	0.25	10.46	
Gujrát	1896-97	611.00	426.61	7.15	11.00	423.76	
	1897-98	611.00	422.76	6.14	7.70	421.20	
	1898-99	611.00	421.20	6.57	13.29	414.48	
Do. Municipality	1896-97	10.85	7.64	0.65	0.34	7.95	
	1897-98	10.85	7.95	0.01	0.22	7.74	
	1898-99	10.85	7.74	...	0.02	7.72	
Gurdáspur	1896-97	605.39	406.00	23.96	12.30	477.66	
	1897-98	605.39	477.66	20.80	13.50	484.96	
	1898-99	610.00	484.96	15.71	11.10	489.57	
Umballa	1896-97	348.91	196.28	7.60	17.31	186.57	36.80 miles in column 6 include 26.50 miles transferred to the Karnál District.
	1897-98	311.23	186.57	9.70	36.80	159.47	
	1898-99	272.30	159.47	12.65	17.98	154.14	
Siálkot	1896-97	838.50	541.74	20.00	...	561.74	
	1897-98	838.50	561.74	7.38	1.25	567.87	
	1898-99	838.50	567.87	7.00	...	574.87	
Do. Municipality	1896-97	6.50	5.00	0.25	...	5.25	
	1897-98	6.50	5.25	0.50	...	5.75	
	1898-99	6.50	5.75	...	...	5.75	
Hoshiárpur	1896-97	513.16	440.50	4.00	...	444.50	
	1897-98	513.16	444.50	2.50	...	447.00	
	1898-99	513.16	447.00	16.50	...	463.50	
Simla	1896-97	2.66	2.66	...	...	2.66	2.66 miles have been entered in column 3 opposite 1896-97, as the annual statement of that year has been found out to be incorrect.
	1897-98	5.66	2.66	2.50	...	5.16	
	1898-99	5.66	5.16	...	...	5.16	
Hazára	1896-97	47.00	18.30	0.25	0.25	18.30	5.66 miles have been entered instead of 3.00 miles in column 3 of Simla opposite 1897-98 owing to the incorrectness of the annual statement.
	1897-98	47.00	18.30	1.00	0.50	18.80	
	1898-99	47.00	18.80	1.00	1.00	18.80	
Do. Municipality	1896-97	4.50	4.50	0.50	0.50	4.50	
	1897-98	4.50	4.50	...	...	4.50	
	1898-99	4.50	4.50	...	...	4.50	
Kángra	1896-97	501.59	416.95	10.37	3.42	423.90	
	1897-98	501.59	423.90	9.45	2.45	430.90	
	1898-99	501.59	430.90	8.23	18.13	421.00	
Dharmśála Municipality.	1896-97	6.35	6.35	...	...	6.35	
	1897-98	6.35	6.35	...	...	6.35	
	1898-99	6.35	6.35	...	...	6.35	
Total	1896-97	13,041.16	7,260.80	280.45	144.74	7,396.51	
	1897-98	13,103.05	7,396.51	234.93	151.85	7,479.59	
	1898-99	13,272.62	7,479.59	330.71	133.50	7,676.80	

STATEMENT No. V—continued.

Progress Statement of Avenues in the Canal Divisions for the years 1896-97 to 1898-99

1	2	3	4	5	6	7	8
DIVISION.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Bári Doáb Canal, 1st Division.	1896-97	179.70	152.86	2.20	...	155.06	
	1897-98	179.70	155.06	5.40	0.50	159.96	
	1898-99	179.70	159.96	7.30	0.50	166.76	
Bári Doáb Canal, 2nd Division.	1896-97	103.06	103.06	...	...	103.06	
	1897-98	103.06	103.06	...	...	103.06	
	1898-99	103.06	103.06	...	...	103.06	
Bári Doáb Canal, 3rd Division.	1896-97	72.80	69.80	...	1.00	68.80	
	1897-98	72.80	68.80	1.40	1.00	69.20	
	1898-99	73.02	69.20	5.00	1.00	73.20	
* Upper Sutlej Division, Inundation Canals.	1896-97	a 527.77	316.78	...	a 0.66	316.12	a 527.77 and 516.75 miles are entered in column 3 as the figures (491.77 and 516.97) in the annual statements have been found out to be incorrect. 0.66 of a mile opposite 1896-97 and 1.95 opposite 1897-98 in column 6 are due to correction of previous errors. 6.01 miles in column 5 include 4.01 miles due to correction of previous returns.
	1897-98	a 516.75	316.12	a 6.01	a 1.95	320.18	
	1898-99	474.67	320.18	7.30	4.71	322.77	
Mooltán Canals Division.	1896-97	b 736.65	577.00	46.56	c 330.55	293.01	b 736.65 miles are entered in column 3 as the figure (408.60) in the annual statement has been found out to be incorrect. c 330.55 miles include 328.05 miles transferred to the Sutlej Independent Sub-Division and 2.50 miles out down to allow of widening of Patrol bank. d 64.79 miles are due to correction of previous returns.
	1897-98	394.30	293.01	10.26	1.00	302.27	
	1898-99	394.30	302.27	1.25	26.25	277.27	
Dera Gházi Khan Division, Indus Canals.	1896-97	399.48	180.71	...	1.74	178.97	e 9.72 miles include 5.72 miles due to correction of previous returns. f 46.50 miles include 39.50 miles transferred to Jhmd Independent Sub-Division.
	1897-98	398.51	178.97	...	1.70	177.27	
	1898-99	385.28	177.27	...	3.61	173.66	
Muzaffargarh Canals Division.	1896-97	69.15	23.98	...	...	23.98	g 41 miles include 39.50 miles received in transfer from Karnál Division. h Late Rohtak Independent Sub-Division has been amalgamated with Delhi Division.
	1897-98	69.15	23.98	...	...	23.98	
	1898-99	69.15	23.98	...	...	23.98	
Western Jumna Canal, Karnál Division.	1896-97	490.77	299.99	14.95	d 64.79	250.15	i 38.27 miles include 35.37 miles due to correction of previous errors.
	1897-98	490.77	250.15	e 9.72	...	259.87	
	1898-99	437.37	259.87	10.50	f 46.50	223.87	
Jhmd Independent Sub-Division.	1898-99	53.40	...	g 41.00	1.50	39.50	
Western Jumna Canal, Delhi Division. h	1896-97	459.34	245.40	29.27	12.45	262.22	
	1897-98	459.34	262.22	...	...	262.22	
	1898-99	450.94	262.22	12.80	4.83	270.19	
Western Jumna Canal, Hissár Division. h	1896-97	191.22	166.39	6.00	10.00	162.39	
	1897-98	191.22	162.39	10.20	8.10	164.49	
	1898-99	237.72	164.49	13.40	3.75	174.14	
Sirhind Canal, Firozpur Division.	1896-97	305.20	159.43	21.00	...	180.43	
	1897-98	305.20	180.43	...	...	180.43	
	1898-99	305.20	180.43	15.00	...	195.43	
Sirhind Canal, Ludhiána Division.	1896-97	334.40	218.15	6.95	0.61	224.49	
	1897-98	334.40	224.49	2.50	i 38.27	188.72	i 38.27 miles include 35.37 miles due to correction of previous errors.
	1898-99	334.40	188.72	0.40	...	189.12	

STATEMENT No. V—continued.

1	2	3	4	5	6	7	8
DIVISION.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Sirhind Canal, Patiala Division.	1896-97	221.74	128.64	7.40	2.70	133.34	
	1897-98	221.74	133.34	21.30	2.00	152.64	
	1898-99	221.74	152.64	8.00	6.50	154.14	
Chenáb Canal, 1st Division.	1896-97	125.79	72.14	29.80	18.43	83.51	
	1897-98	155.19	83.51	11.70	j 14.65	80.56	j 14.65 miles include 3 miles cut for fuel.
	1898-99	160.19	80.56	16.50	0.50	96.56	
Chenáb Canal, 2nd Division.	1896-97	489.10	90.48	18.13	20.96	87.65	
	1897-98	490.70	87.65	18.55	5.40	100.80	
	1898-99	490.70	100.80	14.00	3.50	111.30	
Chenáb Canal, 3rd Division.	1896-97	...	...	...	...	...	
	1897-98	...	...	...	...	...	
	1898-99	69.20	...	125.55	56.35	69.20	
Chenáb Canal, 4th Division.	1896-97	k 61.78	0.20	...	...	0.20	k 0.20 of a mile shown as suitable for avenues in annual return for 1896-97 has been corrected to 61.78 miles.
	1897-98	307.99	0.20	182.69	0.20	182.69	
	1898-99	337.41	182.69	96.22	42.00	236.91	
Chenáb Canal, 5th Division.	1896-97	...	...	...	...	...	
	1897-98	470.60	...	3.00	...	3.00	
	1898-99	611.28	3.00	283.35	247.78	38.57	
Swát River Canals Division.	1896-97	211.00	139.63	5.70	...	145.33	
	1897-98	211.00	145.33	24.12	5.90	163.55	
	1898-99	286.00	163.55	18.69	4.00	178.24	
Jhelum Canal, 1st Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98						
	1898-99						
Jhelum Canal, 2nd Division.	1896-97	271.22	51.26	5.00	...	56.26	
	1897-98	270.96	56.26	8.00	...	64.26	
	1898-99	270.96	64.26	...	...	64.26	
Jhelum Canal, 3rd Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98						
	1898-99						
Sutlej Independent Sub-Division.	1896-97	l ...	...	m 329.48	0.36	329.12	l 328.05 miles have been struck out from column 3 opposite 1896-97, as they have been shown in Mooltan Canals Division. m 329.48 miles include 328.05 miles received by transfer from Mooltan Canals Division. n 73.40 miles due to correction of previous errors.
	1897-98	329.12	329.12	...	4.02	325.10	
	1898-99	509.50	325.10	n 73.40	...	398.50	
Sirsa Independent Sub-Division, Ghaggar Canals	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98						
	1898-99						
Total	1896-97	5,250.17	2,995.90	522.44	464.25	3,054.09	
	1897-98	5,972.50	3,054.09	314.85	84.69	3,284.25	
	1898-99	6,455.19	3,284.25	749.66	453.28	3,580.63	

STATEMENT No. V—concluded.

Progress Statement of Avenues in the Provincial Divisions for the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8
DIVISION.	Year.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at beginning of year.	Length of roads and canals planted during the year.	Length of roads and canals which have failed during the year.	Length of roads and canals fully stocked with trees or plants alive at end of the year.	REMARKS.
		Miles.	Miles.	Miles.	Miles.	Miles.	
Peshāwar Division.	1896-97	108.25	166.82	a 16.18	b 80.85	101.65	a 16.18 miles include 7 miles due to correction of previous returns.
	1897-98	122.25	101.65	4.35	5.00	101.00	b 80.85 miles include 78.95 miles transferred to Hazara Division.
	1898-99	...	101.00	c 25.00	d 126.00	...	c 126 miles transferred to Hazara Division owing to having been made Sub-Division of Hazara Division.
Hazāra Division	1896-97	100.00	...	e 80.65	e 2.72	77.93	d 25 miles in column 5 include 16 miles due to correction of previous errors.
	1897-98	100.00	77.93	6.55	1.04	83.44	e 80.65 miles include 78.95 miles received by transfer from Peshāwar Division.
	1898-99	219.73	83.44	f 131.40	9.86	204.98	f 131.40 miles include 126 miles received by transfer from Peshāwar Division.
Rāwalpindi Division.	1896-97	209.41	90.33	2.00	g 3.40	88.93	g 3.40 miles include 2.90 miles due to correction of previous errors.
	1897-98	209.43	88.93	h 5.19	1.62	92.50	h 5.19 miles include 2.32 miles due to correction of previous errors.
	1898-99	234.66	92.50	0.40	2.95	89.95	i 2.75 miles transferred from Military Works Department.
Kohat North-west Frontier Road Division.	1896-97	78.48	18.78	3.30	2.31	19.77	j 50.93 miles include 50.43 miles received by transfer from the late Firozpur Independent Executive Charge.
	1897-98	78.51	19.77	2.50	3.87	18.40	k 50.43 miles transferred to Ludhiana Division and 19.59 miles to Lahore Division.
	1898-99	78.51	18.40	2.25	4.25	16.40	l Columns 5 and 6 include 30.10 miles transferred from Umballa to Karnāl District.
Gujránwāla Independent Sub-Division.	1896-97	91.79	91.79	...	...	91.79	m 26.51 miles include 26.36 miles received by transfer from Mooltan Division owing to the amalgamation of that Division.
	1897-98	94.54	91.79	i 2.75	...	94.54	n 48.62 miles include 45.42 miles transferred to Amritsar Independent Executive Charge.
	1898-99	94.54	94.54	...	4.84	89.70	o 53.74 miles include 45.67 miles transferred from the late Independent Executive Charge, Amritsar, amalgamated with the Lahore Division.
Ludhiāna Division.	1896-97	144.58	92.04	2.75	2.75	92.04	p 29.14 miles include 19.59 miles transferred from late Firozpur Independent Executive Charge.
	1897-98	144.58	92.04	...	1.39	90.65	q 48.92 miles include 45.42 miles received by transfer from Lahore Division.
	1898-99	209.72	90.65	j 50.93	0.14	141.44	r Transferred to Lahore Division.
Independent Executive Charge, Firozpur Division.	1896-97	100.23	68.52	5.19	5.19	68.52	s 26.36 miles transferred to Dera Ghazi Khan Division owing to the amalgamation of Mooltan Division.
	1897-98	100.23	68.52	2.00	0.50	70.02	
	1898-99	...	70.02	...	k 70.02	...	
Simla Division ...	1896-97	...	...	0.34	...	0.34	
	1897-98	...	0.34	...	...	0.34	
	1898-99	...	0.34	...	...	0.34	
Umballa Division.	1896-97	190.73	145.12	20.12	16.25	148.99	
	1897-98	198.65	148.99	9.42	0.50	157.91	
	1898-99	198.65	157.91	l 31.10	l 1.15	157.86	
Delhi Division.	1896-97	146.00	97.75	...	...	97.75	
	1897-98	174.00	97.75	98.00	98.00	97.75	
	1898-99	183.25	97.75	173.25	173.25	97.75	
Dera Ismaʼil Khan Division.	1896-97	104.99	52.53	1.56	0.67	53.42	
	1897-98	190.86	53.42	0.17	0.58	53.01	
	1898-99	150.37	53.01	2.41	1.25	54.17	
Dera Ghāzi Khan Division.	1896-97	111.63	54.68	0.19	...	54.87	
	1897-98	111.63	54.87	...	0.16	54.71	
	1898-99	111.63	54.71	m 26.51	0.25	80.97	
Lahore Division...	1896-97	138.93	125.34	3.00	n 48.62	79.72	
	1897-98	194.09	79.72	o 53.74	3.93	129.53	
	1898-99	229.18	129.53	p 29.14	4.00	154.67	
Amritsar Division	1896-97	55.16	...	q 48.92	3.25	45.67	
	1897-98	...	45.67	...	r 45.67	...	
	1898-99	...	...	...	...	...	
Mooltān Division	1896-97	33.30	25.83	...	...	25.83	
	1897-98	34.30	25.83	0.25	...	26.08	
	1898-99	34.30	26.08	0.50	s 26.58	...	
Tochi Independent Executive Charge.	1896-97	...	...	...	...	...	
	1897-98	...	...	...	...	...	
	1898-99	Nil.	Nil.	Nil.	Nil.	Nil.	
Total ...	1896-97	1,613.48	1,029.03	184.20	166.01	1,047.22	
	1897-98	1,753.07	1,047.22	184.92	162.26	1,069.88	
	1898-99	1,744.54	1,069.88	472.89	454.54	1,088.23	

STATEMENT No. VI.

Income from Arboriculture in the Districts during the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8	9
DISTRICT.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh ...	1896-97	434	6	...	1,639	400	2,479	
	1897-98	326	26	...	3,450	381	4,183	
	1898-99	323	7	...	1,603	366	2,299	
Mooltan ...	1896-97	2,550	33	...	3,633	87	6,303	
	1897-98	2,612	333	...	502	9	3,456	
	1898-99	2,441	257	...	1,085	11	3,794	
Dera Gházi Khan ...	1896-97	628	...	...	123	512	1,263	
	1897-98	1,413	...	...	68	512	1,993	
	1898-99	1,649	...	...	87	...	1,736	
Dera Ismaíl Khan	1896-97	150	...	...	160	88	398	
	1897-98	322	...	...	209	118	649	
	1898-99	322	...	...	190	69	581	
Montgomery ...	1896-97	563	...	...	531	...	1,094	
	1897-98	361	...	...	379	...	740	
	1898-99	1,124	...	...	524	...	1,648	
Jhang ...	1896-97	748	...	492	257	8	1,505	
	1897-98	863	...	574	784	...	2,221	
	1898-99	725	...	629	326	...	1,680	
, Municipality	1896-97	168	...	...	368	...	536	
	1897-98	157	...	...	334	...	491	
	1898-99	163	...	...	415	...	578	
Bannu ...	1896-97	1,080	...	1,805	349	...	3,234	
	1897-98	1,197	...	2,248	202	...	3,647	
	1898-99	1,063	...	2,321	193	...	3,577	
„ Municipality	1898-99	86	...	...	57	...	143	
Shahpur ...	1896-97	1,693	...	...	7,605	1,259	10,557	
	1897-98	2,423	...	...	6,562	1,850	10,835	
	1898-99	2,112	50	...	5,404	673	8,239	
Hissár ...	1896-97	303	101	...	1,449	...	1,853	
	1897-98	353	...	...	248	...	601	
	1898-99	321	...	...	884	17	1,222	
„ Municipality	1896-97	510	...	...	33	...	543	
	1897-98	444	...	86	48	177	755	
	1898-99	421	...	...	80	...	501	
Ferozpur ...	1896-97	...	112	...	14,771	28	14,911	
	1897-98	...	...	...	4,631	115	4,746	
	1898-99	...	...	153	2,951	...	3,109	
Pesháwar ...	1896-97	962	...	...	1,905	...	2,867	
	1897-98	874	...	...	3,420	...	4,294	
	1898-99	635	...	...	2,046	...	2,681	
„ Municipality	1896-97	1,928	...	...	41	...	1,969	
	1897-98	2,648	...	...	38	...	2,686	
	1898-99	2,842	...	...	83	...	2,925	
Kohát ...	1896-97	801	...	...	...	62	863	
	1897-98	310	...	...	11	56	377	
	1898-99	455	...	...	28	...	483	
Rohtak ...	1896-97	823	...	...	969	100	1,892	
	1897-98	246	...	...	868	90	1,204	
	1898-99	419	...	...	1,322	86	1,827	
Lahore ...	1896-97	4,287	...	...	1,073	...	5,360	
	1897-98	3,724	...	...	1,795	...	5,519	
	1898-99	3,811	...	...	742	...	4,553	
„ Municipality	1896-97	5,763	...	...	...	1,724	7,487	
	1897-98	8,340	...	...	...	2,121	10,461	
	1898-99	5,220	...	...	...	1,787	7,007	
Karnál ...	1896-97	...	167	...	521	67	755	
	1897-98	...	79	...	329	123	531	
	1898-99	...	95	...	981	408	1,484	

STATEMENT No. VI—continued.

1	2	3	4	5	6	7	8	9
District.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Jhelum ...	1896-97	1,111	...	...	2,509	...	3,620	
	1897-98	1,552	...	...	1,750	...	3,302	
	1898-99	1,474	...	...	1,895	...	3,369	
Gujránwála ...	1896-97	1,023	66	...	1,572	21	2,682	
	1897-98	1,181	83	...	1,464	48	2,776	
	1898-99	785	40	...	1,830	74	2,729	
Gurgáon ...	1896-97	90	6	374	1,808	...	2,278	
	1897-98	256	6	216	5,026	...	5,504	
	1898-99	188	10	186	4,362	...	4,746	
Amritsar ...	1896-97	170	25	...	1,529	...	1,724	
	1897-98	256	35	...	2,444	1	2,736	
	1898-99	145	51	...	3,305	157	3,658	
„ Municipality	1896-97	4,274	...	...	3,867	1,811	9,952	
	1897-98	6,427	...	...	7,497	1,300	15,224	
	1898-99	5,329	...	...	3,188	1,693	10,210	
Delhi ...	1896-97	...	15	986	1,000	...	2,001	
	1897-98	...	...	1,085	909	...	1,994	
	1898-99	...	...	1,124	700	...	1,824	
„ Municipality	1896-97	5,022	...	2,666	222	...	7,910	
	1897-98	5,295	...	2,613	78	...	7,986	
	1898-99	4,943	...	2,830	92	...	7,865	
Jullundur ...	1896-97	770	424	827	3,821	49	5,891	
	1897-98	713	184	42	2,154	135	3,208	
	1898-99	444	200	35	3,885	19	4,583	
Ludhiána ...	1896-97	1,331	...	...	16,590	...	17,921	
	1897-98	601	13	...	12,144	17	12,775	
	1898-99	581	14	...	5,690	39	6,324	
Ráwalpindi ...	1896-97	1,680	...	...	2,834	...	4,514	
	1897-98	4,742	...	...	608	...	5,350	
	1898-99	3,357	...	...	1,684	...	5,041	
„ Municipality	1896-97	1,566	...	...	713	...	2,279	
	1897-98	1,161	117	...	421	115	1,814	
	1898-99	1,685	...	...	583	...	2,268	
Gujrát ...	1896-97	119	...	...	6,923	139	7,181	
	1897-98	224	...	19	6,658	66	6,967	
	1898-99	244	...	...	4,819	88	5,151	
„ Municipality	1896-97	155	...	...	414	...	569	
	1897-98	165	...	...	261	1	427	
	1898-99	96	...	...	65	192	353	
Gurdáspur ...	1896-97	914	124	...	5,606	76	6,720	} Difference due to correction of figures in the annual statements.
	1897-98	953	27	...	6,501	...	7,481	
	1898-99	877	111	...	5,389	...	6,377	
Umballa ...	1896-97	688	...	...	3,259	...	3,947	
	1897-98	442	...	...	2,736	...	3,178	
	1898-99	377	...	...	4,104	...	4,481	
Siálkot ...	1896-97	2,966	...	...	24,284	246	27,493	
	1897-98	2,512	...	...	20,639	290	23,441	
	1898-99	1,686	...	...	21,393	388	23,467	
Hoshiárpur ...	1896-97	902	...	...	2,714	2,049	5,665	
	1897-98	906	...	...	2,708	1,546	5,160	
	1898-99	467	...	...	4,707	1,613	6,787	
Simla ...	1896-97	8,794	309	4,290	164	915	14,472	
	1897-98	6,656	312	4,401	79	979	12,427	
	1898-99	6,429	643	3,615	214	688	11,589	
Hazára ...	1896-97	...	3	...	7	160	170	
	1897-98	...	43	...	407	80	530	
	1898-99	...	62	...	34	80	176	
„ Municipality	1896-97	2,324	...	...	211	...	2,633	
	1897-98	3,057	...	...	60	...	3,117	
	1898-99	2,459	...	...	...	...	2,459	
Kángra ...	1896-97	197	...	...	520	...	717	
	1897-98	159	...	...	426	...	585	
	1898-99	221	...	...	617	...	838	
„ Municipality	1896-97	157	...	...	...	...	157	
	1897-98	45	...	...	...	...	45	
	1898-99	...	...	...	...	...	...	
Total ...	1896-97	57,644	1,489	11,440	1,15,994	9,798	1,96,365	
	1897-98	63,916	1,258	11,284	98,828	10,130	1,85,416	
	1898-99	55,919	1,540	10,898	87,557	8,448	1,64,362	

STATEMENT No. VI—continued.

Income from Arboriculture in the Canal Divisions during the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8	9
DIVISION.	Year.	Orna mental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bári Doáb Canal, 1st Division.	1896-97	90	...	6,870	1,738	380	9,078	
	1897-98	288	...	5,360	501	...	6,149	
	1898-99	223	...	5,263	3	1,834	7,323	
Bári Doáb Canal, 2nd Division.	1896-97	51	...	18,582	...	4,276	22,909	
	1897-98	50	...	8,163	...	3,652	11,865	
	1898-99	...	...	5,508	...	19	5,527	
Bári Doáb Canal, 3rd Division.	1896-97	...	...	4,085	...	2,298	6,383	
	1897-98	...	...	2,086	...	2,015	4,051	
	1898-99	...	...	4,977	...	2,759	7,736	
Upper Sutlej Divi- sion, Inundation Canals.	1896-97	...	...	6,548	...	2,164	8,712	
	1897-98	...	...	1,577	...	2,190	3,767	
	1898-99	...	...	2,080	...	2,225	4,305	
Mooltan Canals Divi- sion.	1896-97	...	...	20	3,387	371	3,778	
	1897-98	...	...	18	9,795	327	10,140	
	1898-99	5	...	...	10,672	450	11,127	
Dera Ghāzi Khan Division, Indus Canals.	1896-97	...	...	...	2,625	42	2,667	
	1897-98	...	...	284	5,513	48	5,840	
	1898-99	...	...	...	2,311	41	2,352	
Muzaffargarh Canals Division.	1896-97	57	...	3,442	110	...	3,609	
	1897-98	...	...	5,418	...	...	5,418	
	1898-99	...	...	4,044	...	...	4,044	
Western Jumna Canal, Karnál Division.	1896-97	286	...	2,969	...	...	3,255	
	1897-98	622	...	199	...	...	821	
	1898-99	136	...	265	...	...	401	
Jhind Independent Sub-Division.	1898-99	...	...	2,506	...	...	2,506	
Western Jumna Canal, Delhi Divi- sion.	1896-97	...	...	...	3,764	...	3,764	
	1897-98	...	...	...	4,498	...	4,498	
	1898-99	...	...	...	5,348	...	5,348	
Western Jumna Canal, Hissár Divi- sion.	1896-97	...	...	5,404	24	258	5,686	
	1897-98	28	...	4,427	...	159	4,614	
	1898-99	...	...	4,108	12	260	4,380	
Sirhind Canal, Fi- rozpur Division.	1896-97	...	...	286	...	2,757	3,043	
	1897-98	...	...	2,947	...	1,460	4,407	
	1898-99	...	...	2,310	...	2,850	5,160	
Sirhind Canal, Lud- hiána Division.	1896-97	...	...	2,996	...	10,763	13,759	
	1897-98	...	...	2,666	...	7,520	10,186	
	1898-99	28	...	2,824	...	9,062	11,914	

STATEMENT No. VI—continued.

1	2	3	4	5	6	7	8	9
DIVISION.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Sirhind Canal, Patiala Division.	1896-97	...	...	1,629	...	3,613	5,242	
	1897-98	...	...	3,191	...	3,334	6,525	
	1898-99	...	...	1,661	...	3,445	5,106	
Chenáb Canal, 1st Division.	1896-97	...	...	47	...	1,279	1,326	
	1897-98	...	...	40	...	667	707	
	1898-99	...	...	1,078	...	...	1,078	
Chenáb Canal, 2nd Division.	1896-97	...	...	...	...	...	...	
	1897-98	...	...	...	...	...	...	
	1898-99	...	...	15	...	...	15	
Chenáb Canal, 3rd Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98							
	1898-99							
Chenáb Canal, 4th Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98							
	1898-99							
Chenáb Canal, 5th Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98							
	1898-99							
Swát River Canals Division.	1896-97	...	...	2,010	...	56	2,066	
	1897-98	...	...	1,288	...	5	1,293	
	1898-99	...	...	2,720	...	56	2,776	
Jhelum Canal, 1st Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98							
	1898-99							
Jhelum Canal, 2nd Division.	1896-97	...	...	...	1,401	36	1,437	
	1897-98	...	...	...	731	47	778	
	1898-99	...	...	...	463	60	523	
Jhelum Canal, 3rd Division.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98							
	1898-99							
Sutlej Independent Sub-Division.	1896-97	...	...	...	3,001	106	3,107	
	1897-98	...	...	...	3,311	110	3,421	
	1898-99	...	...	...	2,829	52	2,881	
Sirsa Independent Sub-Division, Ghaggar Canals.	1896-97	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
	1897-98							
	1898-99							
Total ...	1896-97	484	...	54,898	16,050	28,399	99,821	
	1897-98	968	...	37,614	24,349	21,529	84,480	
	1898-99	392	...	39,359	21,638	23,113	84,502	

STATEMENT No. VI—concluded.

Income from Arboriculture in the Provincial Divisions during the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8	9
DIVISION.	Year.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and Avenues.	Miscellaneous.	Total.	REMARKS.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Pesháwar Division	1896-97	...	...	...	435	161	596	Becomes Sub-Division of Hazára Division.
	1897-98	...	...	...	190	201	391	
	1898-99	...	...	...	...	...	...	
Hazára Division	1896-97	...	...	...	313	275	588	
	1897-98	...	3	...	199	362	564	
	1898-99	12	...	...	318	492	822	
Rawalpindi Division	1896-97	40	...	...	990	1,053	2,083	
	1897-98	80	...	...	544	1,183	1,807	
	1898-99	86	...	...	901	1,299	2,286	
Kohát North-West Frontier Road Division.	1896-97	...	...	...	34	...	34	
	1897-98	...	...	...	62	...	62	
	1898-99	...	...	...	95	...	95	
Gujránwála Inde- pendent Sub-Divi- sion.	1896-97	96	...	...	1,550	2,353	3,999	
	1897-98	49	...	...	1,528	767	2,344	
	1898-99	51	...	...	4,892	968	5,911	
Ludhiána Division	1896-97	...	...	...	1,058	1,686	2,744	
	1897-98	...	...	...	1,299	1,689	2,988	
	1898-99	...	...	...	3,725	2,723	6,448	
Independent Execu- tive charge, Fi- rozpur.	1896-97	...	2	124	647	830	1,603	Amalgamated with Ludhiána and Lahore Divisions.
	1897-98	...	...	...	1,708	904	2,612	
	1898-99	...	...	...	...	...	...	
Simla Division	1896-97	Nil	Nil	Nil	Nil	Nil	Nil	
	1897-98							
	1898-99							
Umballa Division	1896-97	...	...	...	2,850	1,932	4,782	
	1897-98	...	...	...	4,324	2,566	6,890	
	1898-99	...	...	...	3,435	3,339	6,774	
Delhi Division	1896-97	...	...	...	742	771	1,513	
	1897-98	...	...	...	1,001	178	1,179	
	1898-99	...	...	...	1,211	1,013	2,224	
Dera Ismáíl Khan Division.	1896-97	29	...	40	89	14	172	
	1897-98	29	...	...	75	100	204	
	1898-99	76	...	...	31	130	237	
Dera Gházi Khan Division.	1896-97	...	...	...	146	...	146	
	1897-98	...	...	...	286	...	286	
	1898-99	...	...	...	347	...	347	
Lahore Division	1896-97	53	3	...	1,791	849	2,696	
	1897-98	147	...	...	2,422	1,592	4,161	
	1898-99	80	...	...	3,269	3,460	6,809	
Amritsar Division...	1896-97	...	...	...	1,024	3,112	4,136	Amalgamated with Lahore Division.
	1897-98	...	...	...	...	...	...	
	1898-99	...	...	...	...	...	...	
Mooltan Division	1896-97	...	...	...	61	6	67	Amalgamated with Dera Gházi Khan Division.
	1897-98	...	...	...	21	6	27	
	1898-99	...	...	...	...	...	...	
Tochi Independent Executive Charge.	1896-97	Nil	Nil	Nil	Nil	Nil	Nil	
	1897-98							
	1898-99							
Total	1896-97	218	5	164	11,730	13,042	25,159	
	1897-98	305	3	...	13,659	9,548	23,515	
	1898-99	305	...	...	18,224	13,424	31,953	

STATEMENT No. VII.

Expenditure on Arboriculture in the Districts during the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	YEAR.	WORKS.								ESTABLISHMENT: General supervising Establishment, including Office Establishment.	Total.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.			
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Muzaffargarh	1896-97	1,553	...	...	...	...	...	3,456	183	...	5,192
	1897-98	1,276	...	...	...	...	...	3,676	...	...	4,952
	1898-99	1,260	915	...	...	...	...	3,593	93	...	5,861
Mooltán	1896-97	7,420	...	133	...	...	...	4,389	...	...	11,942
	1897-98	7,670	...	265	...	...	...	4,712	...	...	12,647
	1898-99	6,722	...	308	...	...	...	5,005	...	...	12,035
Dera Gházi Khan	1896-97	3,039	...	70	...	77	...	1,752	...	120	5,058
	1897-98	2,210	...	...	...	...	...	1,992	...	...	4,202
	1898-99	2,082	...	...	...	...	...	800	...	...	2,882
Dera Ismaíl Khan	1896-97	740	...	400	...	...	...	3,728	160	...	5,028
	1897-98	610	...	290	52	...	...	3,260	148	...	4,360
	1898-99	529	...	262	3	...	...	3,660	...	...	4,454
Montgomery	1896-97	5,364	180	...	...	...	...	*1,350	...	...	6,894
	1897-98	4,756	200	...	...	...	...	883	...	...	5,839
	1898-99	4,255	441	...	...	...	...	678	...	...	5,374
Jhang	1896-97	3,151	...	1,721	...	116	...	796	...	380	6,164
	1897-98	2,600	85	297	96	123	...	1,593	217	214	5,225
	1898-99	2,848	...	...	...	133	...	2,798	...	72	5,851
„ Municipality	1896-97	1,093	...	...	...	...	...	288	...	48	1,429
	1897-98	1,035	...	...	...	...	...	250	...	48	1,333
	1898-99	1,261	...	...	...	...	...	235	...	48	1,544
Bannu	1896-97	1,763	...	...	...	240	...	1,485	...	460	3,948
	1897-98	1,658	...	...	...	...	...	1,542	...	600	3,800
	1898-99	1,744	...	...	...	...	...	1,516	18	600	3,878
„ Municipality	1898-99	92	...	...	...	...	...	96	...	...	188
	1896-97	1,174	470	72	10	...	...	1,273	2,579	972	6,550
	1897-98	814	120	60	15	...	...	2,401	2,394	600	6,404
1898-99	632	340	60	233	...	...	883	3,273	600	6,021	
Hissár	1896-97	2,671	...	923	...	135	...	1,206	...	...	4,935
	1897-98	2,914	...	878	...	...	...	1,302	...	...	5,094
	1898-99	2,837	...	847	...	...	...	1,158	...	...	4,842
„ Municipality	1896-97	2,391	...	...	...	...	...	173	...	...	2,564
	1897-98	1,919	...	...	...	109	...	200	...	...	2,228
	1898-99	3,149	...	...	...	109	...	...	...	...	3,258
Tirozpur	1896-97	...	...	...	...	...	...	14,016	...	1,116	15,132
	1897-98	Nil	...	...	...	...	...	8,601	...	972	9,573
	1898-99	...	...	...	...	...	...	7,749	...	660	8,409

* Rs. 250 were erroneously shown in annual statement of 1896-97 under "Extension of Groves and Avenues" instead of "Maintenance and repairs of existing Groves and Avenues."

STATEMENT No. VII—continued.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	YEAR.	WORKS.								ESTAB- LISH- MENT.	Total.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.		General supervising Establish- ment, including Office Establish- ment.	
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Existing of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Pesháwar	1896-97	2,190	...	...	...	...	...	8,977	249	...	11,416
	1897-98	2,068	...	...	...	...	...	7,833	301	...	10,202
	1898-99	1,871	...	...	...	...	...	7,103	...	...	8,974
„ Municipality	1896-97	3,044	...	...	...	...	...	...	...	...	3,044
	1897-98	2,837	...	...	...	...	...	...	...	...	2,837
	1898-99	3,572	...	...	...	...	...	...	...	...	3,572
Kohát	1896-97	900	...	70	30	...	...	773	91	276	2,140
	1897-98	844	...	80	40	...	...	702	150	276	2,092
	1898-99	1,196	...	100	50	...	...	884	100	276	2,606
Rohtak	1896-97	1,563	...	111	3	...	...	5,370	27	...	7,074
	1897-98	1,397	...	163	...	...	...	3,827	27	...	5,414
	1898-99	903	...	156	...	...	...	3,159	...	...	4,218
Lahore	1896-97	3,101	...	116	...	...	...	3,816	...	...	7,033
	1897-98	3,932	...	70	...	...	...	2,966	...	...	6,968
	1898-99	3,105	...	...	...	...	...	2,959	...	...	6,064
„ Municipality	1896-97	19,863	...	...	...	...	...	171	...	120	20,154
	1897-98	23,049	...	...	...	...	...	36	...	120	23,205
	1898-99	23,896	...	...	...	...	...	769	...	120	24,785
Karnál	1896-97	...	...	433	...	...	...	4,658	293	769	6,153
	1897-98	...	...	619	48	...	...	4,034	...	768	5,469
	1898-99	...	...	990	...	...	...	4,722	...	708	6,420
Jhelum	1896-97	3,306	...	...	...	...	...	...	...	3,361	6,667
	1897-98	3,207	...	...	...	...	...	...	...	3,514	6,721
	1898-99	3,172	...	...	...	...	...	...	...	3,487	6,659
Gujránwála	1896-97	3,528	...	879	...	...	...	4,244	...	516	9,167
	1897-98	3,369	...	755	...	...	...	3,656	...	1,325	9,105
	1898-99	2,785	...	70	...	...	...	2,996	...	855	6,706
Gurgáon	1896-97	858	...	151	...	486	...	2,430	...	...	3,925
	1897-98	1,095	...	151	...	273	...	2,079	...	177	3,775
	1898-99	981	...	268	...	277	...	1,525	...	360	3,411
Amritsar	1896-97	612	72	236	60	...	...	5,443	526	972	7,921
	1897-98	923	724	192	...	...	...	5,324	522	960	8,645
	1898-99	1,092	...	324	175	...	...	5,723	323	802	8,439
„ Municipality	1896-97	16,997	...	200	...	...	...	3,344	...	1,320	21,861
	1897-98	17,408	...	200	...	...	...	2,357	...	1,320	21,285
	1898-99	18,901	...	192	...	...	...	942	...	1,320	21,355
Delhi	1896-97	132	...	164	...	652	...	2,453	344	101	3,846
	1897-98	139	...	155	...	724	...	2,626	27	102	3,773
	1898-99	126	...	138	...	934	...	2,505	25	95	3,823

STATEMENT No. VII—continued.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	Year.	WORKS.								ESTAB- LISH- MENT.	Total.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.		General supervising Establish- ment, including Office Establish- ment.	
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Delhi Municipality	1896-97	10,501	...	...	...	528	...	1,256	...	...	12,285
	1897-98	9,501	...	...	...	525	...	1,014	...	...	11,040
	1898-99	9,251	...	...	...	524	...	966	...	...	10,741
Jullundur	1896-97	2,378	...	798	...	60	...	4,401	...	...	7,637
	1897-98	2,706	...	739	...	74	...	3,636	...	...	7,155
	1898-99	3,189	...	723	49	60	...	3,476	...	...	7,497
Ludhiána	1896-97	3,064	134	...	...	...	...	4,216	136	...	7,550
	1897-98	1,245	...	127	...	...	...	6,187	208	492	8,259
	1898-99	884	...	102	...	...	...	5,318	322	240	6,866
Ráwalpindi	1896-97	3,217	...	...	...	...	...	379	...	...	3,596
	1897-98	3,326	...	...	...	...	...	254	...	...	3,580
	1898-99	3,109	...	...	...	...	...	252	...	...	3,361
,, Municipality	1896-97	4,970	...	...	...	...	...	309	...	300	5,579
	1897-98	2,938	...	...	...	...	...	197	...	300	3,435
	1898-99	4,127	193	...	...	...	...	264	...	72	4,656
Gujrát	1896-97	1,088	...	...	79	...	...	...	3,657	480	5,304
	1897-98	830	...	255	...	...	...	...	* 3,658	425	5,168
	1898-99	958	...	256	...	...	...	...	2,072	360	3,646
,, Municipality	1896-97	686	...	...	...	...	...	134	...	...	820
	1897-98	284	97	...	...	...	...	98	...	...	479
	1898-99	319	85	...	...	...	...	123	...	...	527
Gurdáspur	1896-97	2,240	...	297	...	...	...	...	5,513	...	8,050
	1897-98	2,478	...	140	...	...	...	...	5,847	...	8,465
	1898-99	2,164	...	129	...	...	...	...	5,456	...	7,749
Umbálla	1896-97	1,635	...	100	...	...	...	1,391	600	...	3,726
	1897-98	1,613	...	100	...	...	...	1,257	500	...	3,470
	1898-99	1,461	...	150	...	...	...	1,414	700	...	3,725
Siálkot	1896-97	3,342	...	702	...	...	...	4,755	2,365	3,832	14,996
	1897-98	3,510	...	1,004	...	...	...	4,319	2,362	4,042	15,237
	1898-99	3,157	...	910	...	...	...	4,546	2,101	4,117	14,831
Hoshiárpur	1896-97	1,136	...	288	...	...	...	5,742	...	925	8,091
	1897-98	1,316	...	288	...	...	...	7,478	...	997	10,079
	1898-99	1,087	...	288	...	...	...	6,522	...	1,042	8,939
Simla	1896-97	3,931	...	297	...	2,367	...	...	...	2,723	9,318
	1897-98	4,007	...	293	...	1,824	...	...	...	3,385	9,509
	1898-99	3,793	...	170	...	1,627	...	...	...	3,200	8,790
Hazára	1896-97	120	...	293	...	231	...	77	...	...	721
	1897-98	120	...	272	...	229	...	...	...	...	621
	1898-99	120	...	274	...	190	...	...	...	...	584
,, Municipality	1896-97	1,813	...	...	...	...	...	...	...	...	1,813
	1897-98	1,786	...	...	...	...	...	...	...	...	1,786
	1898-99	1,686	...	...	...	...	...	...	...	...	1,686
Kángra	1896-97	823	...	...	...	...	...	† 962	...	252	2,037
	1897-98	809	...	...	...	...	...	† 961	...	252	2,022
	1898-99	753	...	...	...	...	...	779	...	...	1,532
,, Municipality	1896-97	267	...	28	...	...	69	...	...	139	503
	1897-98	75	...	60	...	90	...	...	...	147	372
	1898-99	120	...	...	...	30	...	...	...	190	340
Total	1896-97	1,27,664	856	8,482	182	4,892	69	99,213	16,723	19,182	2,77,263
	1897-98	1,24,274	1,226	7,453	251	3,971	...	91,253	16,361	21,036	2,65,825
	1898-99	1,25,189	1,974	6,717	510	3,884	...	85,118	14,483	19,224	2,57,099

* Rs. 3,658 erroneously shown in the annual statement under "Maintenance and repairs of existing Avenues, &c."

† Rs. 962 and Rs. 961 were erroneously shown in annual statements under "Extension of Groves and Avenues" instead of "Maintenance and repairs of existing Groves and Avenues."

STATEMENT No. VII—continued.

Expenditure on Arboriculture in the Canal Divisions during the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	Year.	WORKS.								ESTABLISHMENT. General supervising Establishment, including Office Establishment.	Total.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.			
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bári Doáb Canal, 1st Division.	1896-97	420	...	...	...	1,749	1,444	288	36	...	3,937
	1897-98	504	...	...	...	2,700	1,008	100	...	...	4,312
	1898-99	570	...	...	...	2,474	1,901	62	...	...	5,007
Bári Doáb Canal, 2nd Division.	1896-97	195	...	...	...	585	1,414	...	...	...	2,194
	1897-98	132	...	...	...	749	...	588	...	...	1,469
	1898-99	...	...	...	...	2,506	...	384	...	...	2,890
Bári Doáb Canal, 3rd Division.	1896-97	40	...	...	...	...	1,267	...	...	240	1,547
	1897-98	...	...	...	...	278	745	307	...	...	1,330
	1898-99	120	...	...	121	87	2,455	30	120	245	3,178
Upper Sutlej Division, Inundation Canals.	1896-97	...	...	...	...	3,834	...	...	...	...	3,834
	1897-98	...	...	...	...	4,472	...	...	600	...	5,072
	1898-99	...	...	...	...	4,365	...	...	...	...	4,365
Mooltan Canals Division	1896-97	...	...	200	81	2,318	33	633	2,532	...	5,797
	1897-98	850	...	250	60	1,910	65	1,042	199	...	4,376
	1898-99	900	...	120	8	2,430	80	1,194	4,028	...	8,760
Dera Gházi Khan Division, Indus Canals.	1896-97	...	...	...	...	529	...	829	...	24	1,382
	1897-98	...	...	...	...	560	...	802	...	22	1,384
	1898-99	...	...	72	...	420	...	890	...	26	1,408
Muzaffargarh Canals Division.	1896-97	...	...	...	...	1,356	...	...	...	...	1,356
	1897-98	...	...	...	...	1,444	32	...	...	...	1,476
	1898-99	...	...	...	...	1,274	...	...	...	...	1,274
Western Jumna Canal, Karnal Division.	1896-97	2,012	...	1,163	...	...	159	1,228	843	...	5,405
	1897-98	2,687	...	844	...	...	94	1,013	365	...	5,003
	1898-99	2,566	...	277	...	...	616	1,639	...	...	5,098
Jhind Independent Sub-Division.	1898-99	224	...	...	...	...	...	102	...	...	326
Western Jumna Canal, Delhi Division.	1896-97	2,146	1,529	388	..	542	94	568	302	...	5,569
	1897-98	3,250	155	345	...	376	145	722	...	...	4,993
	1898-99	3,284	...	1,466	...	286	108	659	255	...	6,058
Western Jumna Canal, Hissár Division.	1896-97	721	...	1,032	118	...	300	912	1,166	647	4,896
	1897-98	1,232	...	83	233	55	500	559	60	800	3,522
	1898-99	2,355	498	163	132	50	155	1,229	864	697	6,143
Sirhind Canal, Firozpur Division.	1896-97	...	...	136	...	7,414	2,216	174	1,114	...	11,054
	1897-98	...	...	...	...	3,740	3,263	2,182	...	...	9,185
	1898-99	...	...	59	...	7,330	2,977	...	300	...	10,666
Sirhind Canal, Ludhiána Division.	1896-97	...	...	1,561	197	2,689	1,170	1,965	1,256	157	8,995
	1897-98	...	...	1,607	300	2,602	1,617	1,066	545	70	7,807
	1898-99	...	...	1,564	...	3,041	1,096	1,465	717	...	7,883

STATEMENT No. VII—continued.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	Year.	WORKS.								ESTAB- LISH- MENT.	Total.
		Ornamental Gardens.		Nurseries.		Plantations and Afforest- ation.		Groves and Avenues		General supervising Establishment, including Office Establishment.	
		Maintenance and repairs of existing Gar- dens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Ave- nues.	Extension of Groves and Avenues.		
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Sirhind Canal, Patiala Division.	1896-97 1897-98 1898-99	 556	... ... ...	560 1,132 ...	6 ... 1,133	4,567 3,279 ...	222 1,141 6,306	1,296 1,822 645	221 902 683	 747	6,872 8,276 10,070
Chenáb Canal, 1st Divi- sion.	1896-97 1897-98 1898-99	... ... ...	... ... ...	1,294 400 200	... ... ...	644 991 2,297	1,762 1,271 1,200	879 632 700	940 740 800	1,800 1,560 2,300	7,319 5,594 7,497
Chenáb Canal, 2nd Divi- sion.	1896-97 1897-98 1898-99	1,348 592 620	... 734 ...	... ... ...	10 165 ...	5,137 6,219 8,367	804 1,796 623	2,298 1,338 1,499	2,231 759 2,078	677 2,378 ...	12,505 13,981 13,196
Chenáb Canal, 3rd Divi- sion.	1896-97 1897-98 1898-99	... ... ...	... ... 471	... ... ...	... ... ...	... ... ...	... ... 1,270	... ... ...	... ... 6,781	... ... ...	... ... 8,522
Chenáb Canal, 4th Divi- sion.	1896-97 1897-98 1898-99	... 175 1,078	... 351 289	... 9 13	 13	686 2,233 1,420	... 40 3,620	... 2,766 4,112	34 5,658 100	... ... ...	720 11,232 10,645
Chenáb Canal, 5th Divi- sion.	1896-97 1897-98 1898-99	 938	... 2,000 90	 46	... ... ...	... ... 1,774	... 663 1,626	... ... ...	... ... 3,537	... ... ...	... 2,663 8,011
Swát River Canals Divi- sion.	1896-97 1897-98 1898-99	 1,284	... ... ...	... ... ...	... 16 ...	4,337 5,482 1,602	97	 3,389	... 886 261	... ... ...	4,434 6,384 6,536
Jhelum Canal, 1st Divi- sion.	1896-97 1897-98 1898-99	... ... ...	... ... ...	... ... 55	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... 55
Jhelum Canal, 2nd Divi- sion.	1896-97 1897-98 1898-99	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	... ... ...	235 210 202	... ... ...	... ... ...	235 210 202
Jhelum Canal, 3rd Divi- sion.	1896-97 1897-98 1898-99	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.
Sutlej Independent Sub- Division.	1896-97 1897-98 1898-99	... ... ...	... ... ...	... ... ...	... ... ...	1,977 1,886 2,079	... ... ...	... ... ...	... ... ...	... ... ...	1,977 1,886 2,079
Sirsa Independent Sub- Division, Ghaggar Canals.	1896-97 1897-98 1898-99	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.	Nil. Nil. Nil.
Total	1896-97 1897-98 1898-99	6,882 9,422 14,504	1,520 3,240 1,348	6,334 4,670 4,035	412 774 1,407	38,364 38,976 41,802	10,982 12,380 24,033	11,305 15,149 18,201	10,675 10,714 20,524	3,545 4,830 4,015	90,028 1,00,155 1,29,869

STATEMENT No. VII—concluded.

Expenditure on Arboriculture in the Provincial Divisions during the years 1896-97 to 1898-99.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	Year.	WORKS.								ESTAB- LISH- MENT.	Total.
		Ornamental Gardens.		Nurseries.		Plantations and Afforestation.		Groves and Avenues.		General supervising Establishment, including Office Establishment.	
		Maintenance and repairs of existing Gardens.	Extension of Gardens.	Maintenance and repairs of existing Nurseries.	Extension of Nurseries.	Maintenance and repairs of existing Plantations and Afforestation.	Extension of Plantations and Afforestation.	Maintenance and repairs of existing Groves and Avenues.	Extension of Groves and Avenues.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Pesháwar Division	1896-97	180	...	...	...	...	...	3,181	...	...	3,361
	1897-98	...	...	...	...	...	...	4,323	...	...	4,323
	1898-99	...	...	...	...	...	...	...	...	...	* ...
Hazára Division	1896-97	...	...	180	85	...	...	1,765	243	380	2,653
	1897-98	...	...	126	...	...	...	1,808	294	310	2,538
	1898-99	96	...	412	...	...	...	3,888	276	333	5,005
Ráwalpindi Division	1896-97	144	...	294	...	...	...	3,501	...	...	3,939
	1897-98	144	...	125	...	...	...	2,728	70	...	3,067
	1898-99	144	...	108	...	...	...	2,542	22	25	2,841
Kohát North-West Fron- tier Road Division.	1896-97	...	...	...	...	...	...	1,496	375	...	1,871
	1897-98	...	...	141	...	...	...	1,057	...	...	1,198
	1898-99	...	...	188	...	...	...	1,418	380	...	1,986
Gujránwála Independent Sub-Division.	1896-97	...	...	...	...	...	...	1,487	...	...	1,487
	1897-98	...	...	...	...	...	...	1,501	...	...	1,501
	1898-99	365	...	...	...	...	...	1,563	...	...	1,928
Ludhiána Division	1896-97	...	...	10	10	...	...	721	79	485	1,305
	1897-98	60	...	10	10	...	282	160	...	...	522
	1898-99	...	...	10	76	19	77	146	483	...	811
Independent Executive Charge, Ferozpur.	1896-97	...	...	300	...	...	...	1,036	...	...	1,336
	1897-98	...	...	155	...	...	...	1,454	...	...	1,609
	1898-99	...	...	...	...	...	...	...	...	...	† ...
Simla Division	1896-97	4,424	...	...	...	172	110	...	...	264	4,970
	1897-98	5,477	...	...	...	150	110	...	...	192	5,929
	1898-99	5,561	...	...	...	...	...	...	...	192	5,753
Umbálla Division	1896-97	...	...	200	10	...	...	1,169	307	...	1,686
	1897-98	...	...	260	...	...	...	1,342	65	...	1,667
	1898-99	...	...	...	...	...	...	717	387	...	1,104
Delhi Division	1896-97	...	...	776	...	...	...	859	...	...	1,635
	1897-98	...	...	...	...	...	...	1,146	...	105	1,251
	1898-99	...	...	...	...	...	...	641	...	100	741
D. I. Khan Division	1896-97	120	...	40	10	641	18	180	...	951	1,960
	1897-98	120	...	50	20	512	18	380	...	200	1,300
	1898-99	120	...	186	...	906	18	132	...	1,071	2,433
D. G. Khan Division	1896-97	...	...	30	...	...	...	2,095	...	...	2,125
	1897-98	...	...	...	...	...	...	2,322	...	...	2,322
	1898-99	...	...	...	...	...	...	3,754	35	...	3,789
Lahore Division	1896-97	208	...	...	...	...	...	1,917	66	...	2,191
	1897-98	408	...	55	70	...	...	2,847	321	66	3,767
	1898-99	433	...	320	40	...	...	3,868	261	72	4,994
Amritsar Division	1896-97	...	...	...	...	...	...	1,382	132	...	1,514
	1897-98	...	...	...	...	...	...	...	...	...	† ...
	1898-99	...	...	...	...	...	...	...	...	...	...
Mooltán Division	1896-97	...	...	96	...	...	...	1,704	...	95	1,895
	1897-98	...	...	72	...	...	...	1,482	10	95	1,659
	1898-99	...	...	...	...	...	...	...	...	...	\$...
Tochi Independent Exe- cutive charge.	1896-97	...	...	...	...	...	...	...	...	...	...
	1897-98	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
	1898-99	...	...	...	...	...	...	...	...	...	...
Total	1896-97	5,076	...	1,926	115	813	128	22,493	1,202	2,175	33,928
	1897-98	6,209	...	994	100	662	410	22,550	760	965	32,653
	1898-99	6,719	...	1,224	116	925	95	18,669	1,844	1,793	31,385

* Becomes Sub-Division of Hazára Division.

† Amalgamated with Ludhiána and Lahore Divisions.

‡ Ditto Lahore Division.

§ Ditto Dera Gházi Khan Division.

APPENDIX I.

Statement of trees counted at the close of 1898-99 in certain Canal Divisions.

CANAL OR BRANCH.	NUMBER OF TREES.																		TOTAL.												
	Shaham.						Kihar.						Tām.							Mango.						Others.					
	Classes.						Classes.						Classes.							Classes.						Classes.					
	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.		I.	II.	III.	I.	II.	III.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Grand Total.										
Bari Doab Canal, 1st Division.																															
Main Line	1,760	14,559	9,931	47	649	819	171	607	543	65	693	762	1,314	9,322	12,292	3,357	25,830	24,347	53,534	164											
Main Branch Upper	1,721	7,100	4,662	20	69	264	16	45	25	8	80	137	1,245	3,519	12,512	3,010	10,818	17,600	31,428	17											
Kasir Branch	210	8,931	21,458	132	3,664	6,485	...	...	...	...	6	85	44	3,194	8,854	386	15,795	36,885	53,066	...											
Sobráon Branch	227	2,482	22,965	146	4,118	10,090	...	...	...	...	...	56	82	5,827	27,432	455	12,427	60,543	73,425	...											
Distributaries	819	2,121	3,853	175	1,721	3,566	72	222	171	63	378	612	406	1,676	5,692	1,535	6,118	13,894	21,547	73											
Escapes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...											
Miscellaneous	24	481	729	5	178	90	1	6	7	...	29	42	15	71	637	45	760	1,505	2,310	1											
Total	4,761	35,674	63,598	525	10,394	21,317	260	880	746	136	1,186	1,694	3,106	23,609	67,424	8,788	71,743	154,779	235,310	255											
CANAL.																															
Main Branch Upper	44	118	39	...	29	197	...	46	75	8	...	...	6	44	195	50	195	489	684	...											
Ditto Lower	1,586	5,431	6,361	53	724	2,545	...	11	14	75	27	29	289	2,201	3,415	1,929	8,629	12,425	22,983	...											
Lahore Branch	4,358	12,030	8,094	688	3,004	3,701	...	...	...	44	43	72	987	2,307	4,578	6,077	17,395	16,459	39,931	18											
DISTRIBUTARIES.																															
Main Branch Lower	548	1,025	353	102	403	948	6	28	20	30	141	60	286	1,172	1,259	972	2,769	2,640	6,581	...											
Lahore Branch	1,804	1,525	1,236	1,598	2,073	3,314	4	7	6	13	27	36	1,282	1,458	1,554	4,701	5,090	6,146	15,987	...											
Kirn Escape	62	162	1,426	16	709	16,350	...	...	...	...	...	...	3	205	1,047	81	1,076	18,823	19,980	...											
Shahimár Escape	...	4	3	...	10	21	...	...	...	...	...	...	...	...	...	...	...	16	24	40	...										
Niaz Beg Escape	...	30	227	...	4	48	...	...	...	...	...	...	...	24	...	...	58	319	377	...											
Total 1898-99	8,402	20,325	17,739	2,457	7,156	27,124	10	96	123	88	238	197	2,853	7,413	12,092	13,810	35,228	37,275	106,513	18											
Total 1895-96	6,217	20,134	17,855	2,036	7,529	11,572	3	33	75	13	84	349	4,228	12,157	15,984	12,497	39,937	45,836	98,269	24											
Increase or decrease	+2,185	+191	-116	+421	-378	+15,552	+7	+63	+48	+75	+154	-152	-1,375	-4,744	-3,892	+1,313	-4,709	+11,440	+8,244	-6											

Bari Doab Canal, 3rd Division.

Main Branch Lower ...	11,902	15,518	12,589	2,925	9,408	6,888	58	99	219	2	24	412	3,042	8,108	11,651	17,729	32,250	31,709	82,688	92
Distributaries...	649	2,074	8,779	1,691	2,073	2,092	3	33	81	...	...	46	921	2,282	3,477	8,154	6,412	14,651	24,237	...
Escapes ...	10	326	1,101	6	25	40	...	...	...	...	...	...	12	80	651	28	430	1,792	2,250	...
Total	12,461	17,915	22,469	4,622	11,506	9,170	61	132	300	2	24	458	3,975	10,426	15,779	20,911	39,692	48,152	109,175	92
																Last count	...	...	106,430	21
																Increase	...	...	2,745	71

2. MAIN CANAL AND BRANCHES.

Katora Canal	26	97	683	250	2,500	10,000	...	...	...	...	...	36	167	710	10,708	443	3,307	21,422	25,172	...
Khánwah Canal	134	550	164	919	4,535	12,032	...	...	...	...	...	...	460	1,833	7,029	1,518	6,918	19,285	27,716	54
Upper Sohág Canal	155	324	291	1,175	4,563	9,456	...	...	...	...	...	...	348	1,409	6,654	1,878	6,296	16,401	24,875	76
Lower Sohág Canal	...	...	...	28	231	302	...	...	...	...	...	...	7	150	211	35	381	513	929	...
Sohág Branch	...	...	...	1	31	254	...	...	...	...	...	...	7	236	1,814	8	267	2,068	2,843	...
Pára Branch	...	...	...	...	28	198	...	...	...	...	...	...	19	396	1,707	19	424	1,305	2,348	...
Total 2. Main Canal and Branches	315	971	1,138	2,373	11,888	32,292	2	...	10	...	...	36	1,008	4,734	28,118	3,696	17,538	61,594	82,888	130

3. DISTRIBUTARIES.

Atári Rájba	14	19	10	426	455	653	...	...	...	...	...	...	654	1,052	1,173	1,094	1,526	1,836	4,456	...	
Chúnán Rájba	...	1	1	9	48	178	...	...	...	...	...	...	108	136	209	117	185	388	690	...	
Pakhókí Rájba	3	4	...	26	125	110	...	...	...	...	...	...	8	88	85	37	217	195	449	...	
Fakpattan Rájba	...	...	...	...	12	271	...	...	...	...	...	...	...	11	494	...	23	765	788	...	
Bupperwál Rájba	...	...	...	33	323	709	...	...	...	...	...	...	...	43	2	...	33	366	711	1,110	...
Bunga Sáleh Rájba	4	6	16	6	10	32	...	...	...	...	...	...	...	...	...	10	16	48	74	...	
North Rájba	...	74	151	815	921	78	...	...	...	...	...	...	...	...	1,239	815	1,673	1,528	4,016	...	
South Rájba	...	200	49	200	801	626	...	...	...	...	...	...	...	1,403	...	200	2,404	675	3,279	...	
Havelí Rájba	...	...	...	2	32	93	...	...	...	...	...	...	...	5	20	2	87	113	152	...	
Musewál Rájba	...	...	...	5	54	187	...	...	...	...	...	...	2	36	83	7	90	270	367	...	
Bhúman Shah Rájba	...	...	...	...	23	41	...	...	...	...	...	...	...	...	24	...	23	65	88	...	
Farídpur Minor	...	...	...	...	4	25	...	...	...	...	...	...	...	...	5	...	4	80	34	...	
Mári Minor	...	...	...	...	82	133	...	...	...	...	...	...	...	...	2	...	82	135	217	...	
Pirgani Minor	...	...	...	...	...	3	...	...	...	...	...	...	...	...	6	...	...	9	9	...	
Jowáya Biloch Minor	...	...	...	12	169	204	...	...	...	...	...	...	...	...	4	12	169	208	389	...	
Total 3. Distributaries	21	304	227	1,534	3,059	3,343	...	...	...	...	...	...	772	3,452	3,406	2,327	6,815	6,976	16,118	...	
Grand Total	336	1,275	1,365	3,907	14,947	35,635	...	...	10	...	...	36	1,780	8,186	31,524	6,023	24,408	68,570	99,001	130	
Total 1895-96	379	1,011	2,304	6,041	22,432	44,868	...	...	...	...	3	59	1,135	5,970	32,780	7,555	29,416	80,011	116,982	130	
Increase or decrease	-43	+ 264	-939	-2,134	-7,485	-9,233	...	...	+ 10	...	-8	-23	+ 645	+ 2,216	-1,256	-1,532	-5,008	-11,441	-17,981	...	

APPENDIX I—continued.

CANAL OR BRANCH.	NUMBER OF TREES.																		TOTAL.			
	Shāsham.			Kākar.			Tān.			Mango.			Others.			Classes.						
	Classes.			Classes.			Classes.			Classes.			Classes.			Classes.						
	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.	I.	II.	III.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1st Division, Chenab Canal.																						
Khānki Station	...	4	936	...	25	740	...	...	10	...	...	...	...	...	39	...	29	1,725	1,754	...		
Left Protection Bund	...	...	50	...	...	6	...	...	...	...	...	...	...	...	13	...	...	69	69	...		
Main Line R. Bank to Nanuāna	...	101	3,653	...	50	3,991	...	...	...	...	...	...	...	...	1	...	153	7,645	7,798	...		
Main Line L. Bank to Nanuāna	...	1	610	...	10	1,232	...	...	...	...	...	...	...	...	4	...	13	1,846	1,859	...		
Escape Channel, Chināwān	...	8	880	...	8	1,320	...	...	...	...	...	...	...	...	...	...	11	2,200	2,211	...		
Old supply channel	...	32	4,800	...	17	1,200	...	...	...	...	...	...	...	...	...	...	49	6,000	6,049	...		
Chināwān compound	...	11	50	...	25	55	...	...	...	...	...	...	...	...	20	...	42	125	171	...		
Sagar Chanki compound	...	4	265	...	...	...	...	...	16	...	...	...	...	...	5	...	4	289	293	...		
Nanuāna do.	...	...	196	...	...	2	...	...	...	...	...	...	...	...	11	...	...	209	209	...		
Kot Nikka Branch	...	1,135	2,324	...	354	2,316	...	...	...	...	...	...	...	...	142	...	1,648	4,782	5,431	...		
Jandoke Major	...	113	1,120	...	82	426	...	...	...	...	...	...	...	...	649	...	199	2,195	2,399	...		
Kot "	...	...	47	...	4	13	...	...	...	...	...	...	...	...	...	...	...	60	64	...		
Medora "	...	123	553	...	27	86	...	...	...	...	...	...	...	...	...	...	153	671	824	...		
Gajargola "	...	...	15	...	19	85	...	...	...	...	...	...	...	...	26	...	24	76	101	...		
Vānke "	...	1	72	...	99	365	...	...	...	...	...	...	...	...	40	...	137	477	616	...		
Chauki compound	...	81	524	...	6	108	...	...	...	...	...	...	...	...	231	...	148	863	1,015	...		
Total 1898-99	3	1,629	16,095	...	721	11,895	...	...	26	...	...	...	...	...	1,213	...	2,614	29,232	31,868	...		
Total 1895-96	...	654	13,085	...	645	13,145	...	...	6	...	...	...	...	...	700	...	7	26,988	28,430	...		
Increase	3	975	3,010	...	76	...	...	...	20	...	...	...	...	...	513	...	10	2,294	3,438	...		
* Decrease	...	...	...	...	...	1,250	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2nd Division, Chenab Canal.																						
Gujrānwāla	...	718	17,423	...	63	929	...	...	2	...	...	...	...	...	83	...	786	18,448	19,232	...		
Jhang "	...	6	10,822	...	4	3,999	...	...	1	...	...	...	...	...	69	...	10	14,391	14,901	...		
Total	...	724	28,245	...	67	4,928	...	...	3	...	...	...	...	...	152	...	796	33,337	34,133	...		

* Decrease owing to fuel cutting.

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1903

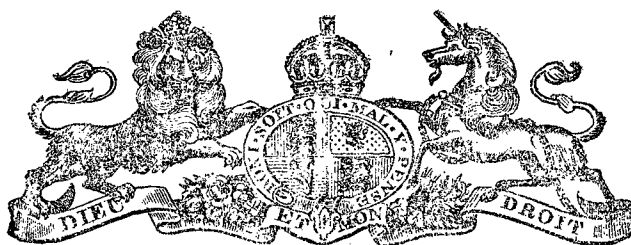
PROGRESS REPORT

ON THE

ARBORICULTURE IN THE PUNJAB

FOR THE TRIENNIAL PERIOD 1899-1900 TO 1901-1902.

Published by Authority.



Lahore:

THE "CIVIL AND MILITARY GAZETTE" PRESS,
Sole Contractors for Printing to the Punjab Government.

1902.

READ—

The Report on Arboriculture in the Punjab during the years 1899-1900 to 1901-02, submitted by the Conservator of Forests, Punjab, with his letter No. 3261, dated the 27th of November 1902.

REMARKS.—This report was due on the 1st September, but its submission was considerably delayed owing to causes beyond the Conservator's control. These causes point to the necessity for more care on the part of District Officers in preparing the district reports. The present report has been much curtailed with reference to the recent orders of the Government of India, and it is only necessary for the Lieutenant-Governor to make a few remarks in regard to it.

2. The district arboriculture returns continue to show a high percentage of failure in planting operations on avenues. On the other hand, there has been a satisfactory increase in the areas under groves and plantations, and some gardens have been started in Muzaffargarh, Ludhiana and elsewhere. The suggestion of the Deputy Commissioner of Montgomery for the furtherance of arboriculture on the extension of the Lower Bari Doab Canal will be borne in mind in connection with certain proposals now under the consideration of Government for dealing with district arboriculture generally, and it may be mentioned, in this connection, that on the Jhelum Colony (and on the extensions of the Chenab Canal) tree-planting has been made obligatory. In the Jhang District tree-planting operations have been placed on a systematic basis, a plan of operations having been drawn up and trained Foresters appointed to look after them, and the Lieutenant-Governor is glad to observe that other districts have also started operations on somewhat similar lines, but, as the Conservator observes, much remains to be done in this direction. The want of adequate protection of young trees by cactus fences or other effective means is noticeable.

3. The operations conducted by the Irrigation Department in the Jhang District should have good results, but the operations of this Department as a whole, from a financial point of view, are *prima facie* unsatisfactory as they show a deficit of nearly two lakhs of rupees, and some explanation on this point might have been offered.

4. The attention of all officers concerned is invited to what is said by the Conservator of Forests in paragraph 15 of the report, in particular to the remarks made on the causes of failure in planting work and the remedies suggested by that officer. The provisions of the Cattle Trespass Act should be freely resorted to in order to prevent damage to young trees by goatherds, camelmen and others. The Lieutenant-Governor hopes that the necessity for the preparation of definite programmes of road arboriculture and the appointment of trained subordinates to carry them out will not be lost sight of, and His Honour has no doubt that in these and other similar matters District Officers will gladly avail of the advice and assistance which Mr. Bryant is willing to give.

ORDER.—Ordered, that the above remarks be printed and circulated with the report as usual; also that they be published in the *Punjab Government Gazette* and forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, and the Conservator of Forests, Punjab.

By order of the Hon'ble the Lieutenant-Governor,

J. F. CONNOLLY,

Offg. Revenue and Finl. Secy. to Govt., Punjab.

No. 3261.
FOREST DEPARTMENT, PUNJAB.

FROM

F. B. BRYANT, Esquire,
Conservator of Forests,
PUNJAB,

TO

THE REVENUE AND FINANCIAL SECRETARY TO THE
GOVERNMENT OF THE PUNJAB.

Dated LAHORE, the 27th November 1902.

SIR,

I have the honour to submit the Progress Report on Arboriculture in the Punjab for the three years 1899-1900 to 1901-1902.

This report was due to Government on the 1st September; and the various District Reports were due in my office on the 1st July 1902. The last of these was not, however, received until the 1st November 1902. Moreover the reports and returns were in many instances very carelessly prepared, and a larger number of errors and discrepancies necessitated numerous references to the officers concerned, with the result that I have been quite unable to submit the report at an earlier date.

I have the honour to be,

Sir,

Your most obedient servant,

F. B. BRYANT,
Conservator of Forests, Punjab.

PROGRESS REPORT
ON THE
ARBORICULTURE IN THE PUNJAB
FOR THE TRIENNIAL PERIOD 1899-1900 TO 1901-1902.

A.—District Arboriculture by Government Agency.

(a).—GENERAL.

1. During the period under report the total length of avenues amounted to 733·40 miles, of which 151·88 miles were due to corrections of previous returns and transfers, thus leaving 581·52 miles as the actual length planted up.

Avenues.

The failures amounted to 390·02 miles as compared with 343·40 miles during the previous period, and corrections and transfers to 55·26 miles, thus leaving a net addition of 288·12 miles. The chief additions to avenues successfully planted were in the Jhang, Jhelam, Amritsar, Ludhiána, Gujrat, Hoshiarpur and Kangra districts. In Multan 52·70 miles of avenues have been made over to the District by the Forest Department, and 91·93 miles have been added owing to corrections of previous returns.

2. Under groves the period shows a net increase in area of 495·52 acres, compared with a decrease of 388·48 in the previous three years. The work of the year includes 1,100·31 acres planted, 21·98 acres received by transfer, and 1·10 acres by correction of previous returns, whilst failures amounted to 390·53 acres, and exclusions on account of transfers and corrections to 237·34 acres. The chief additions occurred in Miánwáli, Muzaffargarh, Sháhpur and Karnál. The figures for the Miánwáli district supplied by the Tahsildár are not reliable, as there are no previous returns, the district having been constituted during the period.

Groves.

3. The total area brought under plantations amounted to 2,123·12 acres, from which must be excluded 105·78 acres due to transfers, leaving a balance of 2,017·34 acres, as the area planted during the three years. Of this area 394·16 acres failed, and 1 acre was cut over and the produce sold, thus giving a net increase of 1,727·96 acres.

Plantations.

The areas of new plantations successfully established were in the Miánwáli, Ferozepore and Jullundur Districts. The figures for the Miánwáli district shew an area of 1,600·44 acres successfully stocked during the three years. This is a much larger area than has been stocked in any other district, and the figures need verification before they can be accepted as correct.

4. The total additions under the head of nurseries amount to 41·59 acres, of which 0·11 acres are due to transfers leaving a balance of 41·48 acres of new nurseries. Of this area 27·23 acres failed, 97·61 acres were transferred, partly to other heads and partly to the Canal Divisions, and 10·34 acres were excluded on account of corrections and other causes. Thus there is a net decrease of 93·59 acres in the area of nurseries as compared with a net decrease of 24·15 acres during the previous triennial period.

Nurseries and gardens.

A new garden was laid out at Alipur in the Muzaffargarh District to commemorate the capture of Pretoria, and was planted with fruit trees. In the Jhang District the gardens are in a good and flourishing condition, but no special

work has been done during the period. In Sháhpur a small new garden has been started in the compound of the Sadar Dispensary. The District Board at Gujránwála maintains six gardens. The cultivation of the Malta orange in the gardens at the Sadar Station continues to be a success, and there is always a great demand for the fruit. The income is, however, much less than the expenditure, which is to be expected, seeing that the gardens are all more or less ornamental.

The Rámbágh at Amritsar continues to maintain its reputation as an attractive resort for the general public. The income is steadily on the increase, being Rs. 9,068 as compared with Rs. 8,087 during the previous triennial period.

The Aitchison and Nicholl parks are also in a flourishing condition.

A new garden was planted at Safdar Jang's tomb in the Dehli District.

There are two gardens, one ornamental and the other a vegetable and fruit garden, in the Ludhiána district. The latter is self-supporting, and in order to make the former partially so, mango and Malta orange trees have been planted.

Experiments with *jowár* seed supplied by the Director of Land Records, Punjab, were to be carried out during the rains of 1902.

The six public gardens in the Ráwalpindi district continue to be maintained for the propagation of fruit trees and flowers.

The gardens in the Umballa district are not, with one exception, paying concerns. In the Hoshiárpur district there are six gardens which are laid out with flowers and fruit trees. No further experiments were made with morram grass or *Eucalyptus* trees, but the seeds of *Inga dulcis mimosæ* were supplied by the Director of Land Records, and were made over to a retired Extra Assistant Conservator of Forests, who reports that they have germinated and have now reached a height varying from 3 to 7 feet. He expresses a hope that the plants will form a good hedge.

Details of the progress made in avenues, groves, plantations and nurseries are given in Statements I to IV appended to this report.

(b).—DETAILS OF WORK DONE.

5. *Muzaffargarh*.—The length of avenues was increased by 5.54 miles, while some 8,000 young trees were planted in gaps. On account of the *soma* water it is found very difficult to keep up the trees when planted, but efforts are being made to overcome this. In order to commemorate the capture of Pretoria a garden of 25.75 acres was laid out at Alipur and was planted with fruit trees. Old nurseries in this district are utilized time after time, new sowings being made when the old plants have been removed. Owners of private lands lying along the principal roads have also been asked to give temporarily small pieces of land near wells where trees have been sown and planted, and from which a sufficient number of plants to meet the demand has been obtained.

Multán.—A map has been prepared showing the actual state of avenues, roads, etc., in the district. According to this map the measurements of the roads shew an increase of 91.93 miles, thus proving how faulty the previous returns must have been. Gaps were filled up and new avenues planted along 15.60 miles of roads during the period. Failures amount to 66.59 miles leaving the total length of roads planted up as 162.20 miles out of a total length of 1,253.28 miles in the district.

Dera Gházi Khan.—The state of nurseries continues the same as before, no improvements having been found practicable owing to continued drought. The vagaries of the river have deterred land-owners from planting new gardens near its banks.

The rise of the subsoil water has gone far to affect the utility of the land adjoining the river, and has stopped further development of groves. No new work has been undertaken in the planting up of roads with avenues on account of the drought.

Montgomery.—No work was done during the period, but the Deputy Commissioner submits proposals for laying out avenues along the roads which will come within the area to be irrigated by the Lower Bári Doáb Canal. He suggests that one square of land should be given revenue free on every mile of road on the condition that the tenant shall plant up and maintain avenues of trees on that mile. The suggestion appears to be an excellent one, and the plan might well be tried in other districts. In such a dry district, avenues and shade are very valuable, and when the canal reaches the Montgomery *bár* arboriculture should be greatly facilitated.

Jhang.—The planting of avenues in this district is confined to the Chenáb Colony where canal water is available; 41·40 miles of roads were planted during the period of which only one mile failed.

Seven temporary nurseries were sown and were utilised for supplying road-side trees.

The old plantation on the left bank of the Jhelam has been looked after, and is in good condition.

The importance of arboriculture in this district has been fully recognized, and the services of three Forest officials have been secured from the Forest Department. A plan of operations has been drawn up for a term of 3 years from 1901-02 to 1903-04. The chief work proposed is road-side arboriculture, but out of 44½ miles proposed for the last year of the triennial period, 21 miles only have been planted, the remainder being left uncompleted owing to various causes. The arrears will, however, be taken in hand during the ensuing cold weather.

Sháhpur.—There was a decrease of 38·21 miles in the lengths of avenues planted up, due to failures on account of drought.

The report for the district shows a very unsatisfactory state of affairs as far as arboriculture is concerned, very little successful work having been done during the triennial period.

Hissár.—Arboriculture in the Hissár District is carried on under great difficulties owing to the very scanty rainfall. A serious obstacle to the maintenance of trees and groves already existing in villages and on the outskirts of towns has arisen. The requirements of the large cotton factories at Hissár, Hānsi and Bhiwāni have created a very large demand for fuel, and in consequence the high prices have induced many proprietors of zamíndári lands to cut and sell their valuable timber. So long as harvests are bad, and high prices are available for fuel, it is to be expected that villagers will continue to cut down and dispose of trees growing on their lands.

A plan of operations has been drawn up for arboriculture in this district, and given a fair rainfall will be carried out as far as possible.

Ferozepur.—The results of the work in this district have been very unsatisfactory, although a considerable amount of work has been done during the period. Some 20 miles of trenches were dug for the establishment of avenues, but from various causes, principally drought, practically the whole failed.

Rohtak.—Ten new nurseries were established during the period, but with the exception of four all failed, the young plants dying for want of water.

New plots in the vicinity of each village were selected for planting up as groves in the place of those selected in 1884 which have now become so reduced in size and number that they can hardly be called groves. The number of trees planted in avenues was 8,478, of which 92 per cent. failed on account of drought.

Lahore.—A Dárogah was appointed for the better administration of road-side trees and sale of wood. The result of the new system of rules enforced was found satisfactory during the triennial period, and it is now proposed to largely extend operations.

The work during the period was chiefly confined to the planting of a few of the more important roads, and filling up gaps in old lines of avenues.

Karnál.—The District Dárogħa was sent to Chángā-Mángā for training in arboricultural work. The District Board has during the period started the cultivation of fruit trees, with a view to their distribution amongst villagers.

Jhelam.—The greater part of this district is entirely dependent on rain for the planting and up-keep of road-side trees which on this account will always prove difficult. During the period under report some 20 miles of roads were successfully planted up with avenues.

Gujránwála.—12·25 miles of roads were planted up with trees during the period, of which 2·50 miles failed. Roadside trees are watered by the Chenáb Canal and by means of *bhishtis*. The trees when planted are, it is reported, properly protected by means of thorn fences or mud walls to prevent damage by goats or other animals.

No proper plan of operations was maintained for the first part of the triennial period, but a programme was drawn up in August 1901 in consultation with the District Forest Officer. A fresh plan of operations for five years is in course of preparation, and as soon as it is complete, entries will be made in proper control books in order to allow of efficient checking to be carried out by the inspecting officers.

Gurgáon.—The period under report has been very unfavourable for arboricultural operations, and without a good rainfall it seems almost impossible to improve matters as on a number of roads, wells are at such a distance from each other that the cost of watering young plants is prohibitive. A plan of operations for three years was drawn up, but was not carried out on account of want of funds. During the past year a retired Lance-Duffadar was sent to Chángā-Mángā for three months to undergo a course of training.

It is to be regretted that, owing to the impoverishment of local funds in consequence of the large suspensions and remissions of land revenue, very little expenditure can be incurred on arboriculture.

Amritsar.—32·02 miles of roads were successfully planted up with avenues during the triennial period. A large number of cattle were impounded during the three years under report for injuring young plants and trees on the road-sides. The damage done to the young plants by cattle passing along the roads is one of the chief causes of failures in the avenues.

Ludhiána.—22·75 miles of roads were planted up with avenues during the period, and all gaps filled up on existing avenues. A forester is employed in the Ludhiána Tahsíl on arboricultural work. Great difficulty is experienced in growing road-side trees on account of the extensive damage done by goats and cattle which are allowed to wander loose by their owners. Impounding seems to have no deterrent effect on the owners of the cattle.

Ráwalpindi.—No material progress is reported in this district, the weather having, as a rule, been detrimental to any extensive tree-planting operations. Nurseries are being established in the gardens at Ráwalpindi and Chattar with the object of continuing the stocking of road-side avenues in the immediate vicinity of Tahsíl head-quarters.

Gujrát.—A good deal has been done in the extension of avenues, and in filling up gaps and blanks on different roads.

A three years' plan of arboriculture was drawn up for each Tahsíl, and was acted up to as far as possible.

In the Gujrát Tahsíl considerable effort was made to increase the number of road-side trees. Each main road from the Sadr Station up to a radius of 1 to 8 miles has been planted with *shisham* trees.

Umballa.—53 miles of avenues failed during the period as against 48·50 miles planted up.

Plans of operations have never been prepared in the Umballa District, but in 1900 Tahsildárs were asked to submit proposals with a view to drawing up such plans. The proposals submitted were, however, far too expensive, and fresh proposals have been asked for.

Siálkot.—Most of the roads in the district are well stocked with trees. A length of 24·25 miles was planted, and failures amounted to 17·75 miles during the period, thus showing a net increase of 6·50 miles.

Great damage is done to trees by goat-herds, who ruthlessly lop off branches with a sharp pruning knife attached to a long bamboo to feed their goats with. There are large flocks of goats in almost every village fed entirely on road-side trees; the road *máls* being quite unable to cope with the offenders who turn out in large gangs. Prosecutions, which have been instituted, have, in many cases, failed, owing to insufficient evidence. Orders have been recently issued to all chowkidárs and lambardárs to render all possible assistance to the road-side establishment in order to prevent the destruction of trees.

Hoshiárpur.—31·75 miles of roads were planted up with avenues as compared with 23 miles during the previous triennial period. One of the chief causes of failure of road-side avenues is the constant damage done to young plants by passing cattle. To prevent this cactus fences, which are both effective and lasting, are used. Where cactus is not procurable thorny branches are used instead.

During the past year efforts have been made to induce Local Boards to take some rational interest in arboriculture and to submit each a definite working plan for its jurisdiction. The attempt has, however, so far not met with any conspicuous success, owing to the absence of expert advice and the want of trained subordinates.

Kángra.—A considerable amount of work has been done in this district towards the extension of road-side avenues, the length of roads successfully planted amounting to 33·28 miles. The length planted during the previous triennial period amounted to only 4 miles. Fruit culture in the Kángra district has been rather extensively taken up, and a number of trees of various kinds have been distributed amongst owners of gardens at Dharmśála, and in the Pálpur, Kángra, Dera and Kulú Tahsils. The most successful have been the peach and plum trees.

(c).—FINANCIAL RESULTS.

6. The revenue from arboriculture during the triennial period amounted to Rs. 5,21,620 and the expenditure to Rs. 6,82,797, thus giving a deficit of Rs. 1,61,177 as compared with a deficit of Rs. 2,14,753 during the previous period. The highest revenue was derived from the Siálkot, Sháhpur, Lahore, Hoshiárpur, Simla, Gurdáspur and Gujrat districts, and Delhi, Lahore and Amritsar Municipalities. The highest expenditure was incurred in the Siálkot, Multan, Hoshiárpur, Ludhiána, Amritsar, Simla, Jhang, Ferozepur and Gujranwála districts, and Lahore, Delhi and Amritsar Municipalities.

B.—Canal Arboriculture.

7. The total length of avenues has increased by 524·96 miles after adding and deducting the entries due to corrections of previous returns, as well as those due to transfers to other heads. The total length of avenues planted during the period amounted to 1,221·47 miles as compared with 1,136·27 miles during the previous triennial period. The actual failures amounted to 539·55 miles.

8. The area under plantations has increased by 1,330·84 acres. The area actually planted during the period amounted to 2,451·93 acres, of which 1,221·24 actually failed.

The area added due to corrections of previous returns and to transfers amounted to 2,471·77 acres and that excluded for the same reasons to 2,371·62 acres.

9. The area under nurseries at the end of the period amounted to 75·84 acres, showing an increase of 23·80 acres over the corresponding figure at the end of the previous triennial period. The actual area planted as nurseries amounted to 176·29 acres, and failures amounted

to 54·54 acres. The area added on account of corrections of previous returns and transfers amounted to 30·30 acres, and the area excluded for the same reasons to 116·55 acres.

In the Jhang Division of the Chenáb Canal nurseries of *shisham* were sown at each chowki compound. No transplantations were ever made for canal purposes, but in 1900 a considerable demand for seedlings sprang up amongst the colonists; and young trees were furnished to them gratis from the chowki nurseries in large numbers. The selection of the seedlings to be transplanted was made by the canal establishment, but the colonists did the excavation and all other work at their own cost. In selecting seedlings the best trees were retained in the nurseries to form a grove in each chowki compound, and this object has been attained in all cases. There is now in every chowki compound a compact and well defined grove of young *shisham* trees which are regularly pruned and thinned out when necessary. The prunings and thinnings are utilized for fuel during the winter.

10. The revenue during the period amounted to Rs. 2,21,713 and the expenditure to Rs. 4,21,540, thus showing a deficit of Rs. 1,99,827 as compared with a deficit of Rs. 51,249 during the previous triennial period.

Financial results.

The highest revenue was received in the Sirhind Canal, Ludhiána and Patiala Divisions, Bári Doáb 1st and 2nd Divisions, and the Muzaffargarh Canal Division.

The highest expenditure was incurred in the Chenáb-Lyallpur Division, Chenáb-Upper Gugera Division, Chenáb-Jhang Division, Western Jumna, Karnál, Delhi and Hissár Divisions, Sirhind Patiala Division, Jhelum 2nd Division, Upper Sutlej Inundation Canals and Multan Canals Divisions.

C.—Arboriculture on Provincial Roads.

11. The total length of roads under avenues is 875·50 miles, which is an increase of 62·82 miles during the period under report. The total length of roads planted during the period amounted to 60·54 miles, of which 44·42 miles failed.

12. 234·73 miles were added owing to transfers and 188·03 miles were excluded for the same reason, and owing to corrections of previous returns.

13. The statements at the end of the report show a decrease of 38·91 acres under groves, an increase of 82·78 acres under plantations and a decrease of 1·05 acres under nurseries.

14. The revenue of the period amounted to Rs. 84,243 and the expenditure to Rs. 59,343, giving a surplus of Rs. 24,900. The highest revenue was derived from Amritsar, Lyallpur, Umballa and Lahore Divisions, and the highest expenditure was incurred in the Simla, Lahore and Lyallpur Divisions.

15. The total number of miles of avenues planted up with trees during the period to which the report refers was 1,863·53. Of these 973·99 miles are reported to have failed.

General remarks.

Under groves a total of 1,100·31 acres were added by new work, of which 390·53 acres are shown as failure.

Under plantations a total area of 4,468·98 acres was planted up, of which 1,615·40 acres failed.

Of the new work done on avenues therefore 52·26 per cent., of that on groves 35·5 per cent. and of that on plantations 35·92 per cent. was a failure. This large percentage of failures notwithstanding the trouble that has been taken and the expenditure of money that has been incurred, as well as the considerable success that has been attained in many districts, fully exemplifies the great difficulty of successful arboricultural operations in the dry or very dry districts of the Punjab. At the same time greater care in the actual planting operations would, it is thought, diminish the at present high proportions of failures. One of

the chief causes of failure in planting work is the drying up of the roots of the young plants after they are removed from the nursery, and before they are put into the ground. This is often caused by planting work being undertaken at unsuitable times such as (and instances of this have been noticed) in the hot weather before the rains, or after the rains have ceased. Except in places where there is plenty of water available planting at such times can have no chance of success. And at all times it is most important to keep the roots of the young plants moist after they have been removed from the nursery, and the best way of doing this is to keep them covered with moist earth. Young plants should be moved during the rainy season or after the winter rains, should such occur. In places where plenty of water is available planting can be carried out with success at all times. But even then the rainy season or the winter will probably prove the best time to move young plants, whilst in very dry districts success must always be doubtful, but will be most likely to be attained by carrying out planting operations in the winter as soon as there is no longer any fear of frost.

Another fruitful cause of failure is insufficient or unsuitable protection for the young plants. In the one case much damage is caused by cattle, sheep and goats such as that of which complaints are made in the Gujranwála, Amritsar, Jullundur, Ludhiána, Siálkot and Hoshiárpur districts, and in the other the young trees are often stifled by want of air. The question of fencing young trees is fully dealt with in Sections 75 and 76 of the Arboricultural Manual, but the subject requires more intelligent attention than it receives.

Many of the reports, particularly those of Amritsar, Ludhiána and Hoshiárpur, show that after trees have been successfully reared, and after they have with much care and expense attained a fair size, they fall victims to camel, goat and sheep owners who ruthlessly lop them of their leaves for fodder, and who in this manner kill or mutilate many a tree obtained with much difficulty, time and expense. It is considered that the rules protecting road-side trees should be more strictly enforced than they appear to be at present; and that the people should be made to understand that they cannot destroy with impunity, and for purely private purposes, trees which have been raised by Government for the benefit of the public.

The revenue realised from all sources has been Rs. 8,27,576, whilst the expenditure has amounted to Rs. 11,63,680, showing a deficit of Rs. 3,36,104 during the three years' period, or an average of Rs. 1,12,034 per annum. Although the cutting down of road-side trees merely to make revenue cannot be justified, yet the condition of many of the avenues is such, that the removal of a considerable number of trees from them is advisable, and could not fail to be beneficial. Old deteriorating trees should be removed; and, generally speaking, wherever the trees are growing so close together as to interfere with each other's free development, the least promising stems should be removed. The material thus made available, if properly disposed of, should yield a considerable sum, and should go far towards making the Revenue more nearly equal to the expenditure. The timber available is usually, it is understood, sold by auction *in situ*, and, with a very small attendance from the villages close by, often does not realize anything approaching its real value. Wherever timber of any value is available, it will probably be found advantageous to bring it in to the nearest large town, and to dispose of it there; or to sell it *in situ* at a proper price per c.ft.

With regard to the remarks made by the Government of India on the Report for the previous triennial period, suggesting that definite programmes of road arboriculture should be drawn up and submitted to the Conservator of Forests for approval, a commencement has been made in this respect, such programmes having been received from six districts—Jhelam, Siálkot, Gujrat, Jhang, Karnál and Rohtak, and from the Ráwalpindi Provincial Division.

There are, however, 27 districts in the Punjab in which tree-planting works are undertaken, and it is therefore evident that very much remains to be done in this direction. Without well considered plans of work to be done during a period of years, and with the frequent changes of officers and district staff which occur, tree-planting operations cannot fail to be spasmodic and wanting in continuity, and the preparation of definite programmes of work in the various

districts should, it is thought, be insisted on. The preparation of plans of work and their scrutiny by the Conservator has been demurred to in certain canal Divisions, and the objections raised have to some extent been accepted by Government (letter No. 442, dated 15th August 1901, from Revenue Secretary to Chief Engineer). The preparation of programmes of tree-planting work on canals is doubtless of less importance than in the districts, as the work is more concentrated, and under constant inspection by canal officers. There is, however, no doubt that such a programme would lead to more systematic works being done. Programmes of work have been prepared, and are being carried out in the Western Jumna and Sirhind Canal Circles.

Maps illustrating the state of arboricultural work have been sent in for all districts, and have been well prepared. They do not, however, show the work done during the period under report, and it is suggested that these maps would serve a more useful purpose if they showed the work which it has been proposed to undertake under the plans of operations; and also how much of this has been done.

The proposal that trained men should be utilized for arboricultural work is being given effect to, five men having received training in the Chángá-Mángá plantation for periods of from two to three months. They were taught grafting, pruning, sowing and planting work, and were also shown how thinnings and fellings were carried out. These men were sent by the Amritsar, Karnál and Gurgáon districts. A Forest Ranger and 2 Foresters are also employed by the Jhang District Board on arboricultural work, and since the close of the period two men have been deputed by the Deputy Commissioner to the Dehra Dún School to receive a special training. It is hoped that the good example thus set will be followed in other districts, as the presence of trained subordinates cannot but be beneficial.

The advice of the Conservator of Forests has been asked on several occasions, and will be willingly given to all who ask for it. Unfortunately the great extent of country over which operations extend renders any effective or thorough inspection by Forest Officers in addition to their own duty impossible. But wherever inspection of definite areas by a Forest Officer is considered desirable endeavours will be made to have this carried out.

STATEMENTS.



Statement No. I (a).

Progress Statement of Nurseries in the Districts for the triennial period 1899-1900 to 1901-1902.

1	2	3	4	5	6
DISTRICT.	Area under nurseries at the beginning of the triennial period.	Area added during the period.	Area given up or transferred to groves during the period.	Area remaining at end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Muzaffargarh	1.51	...	...	1.51	
Multán	30.36	0.96	(a) 30.94	0.38	(a) Column 4 includes 29.42 acres of nursery at Kukarhatta transferred to the Multán Canals Division.
Dera Gházi Khan	5.25	...	...	5.25	
Miánwáli	5.89	0.09	1.03	4.95	
Montgomery	Nil.	Nil.	Nil.	Nil.	
Jhang	11.37	7.72	(b) 14.59	4.50	(b) Includes 8.03 acres transferred to groves.
Sháhpur	4.09	3.45	0.39	7.15	
Hissár	124.55	...	...	124.55	
Ferozepore	1.00	1.62	2.12	0.50	
Rohtak	1.85	1.21	1.12	1.94	
Lahore	8.47	2.32	...	10.79	
Lahore Municipality	0.20	...	...	0.20	
Karnál	10.38	2.33	(c) 10.34	2.37	(c) The area in column 4 includes 7.51 acres (shown as nurseries, but larger part of which was used as station garden) sold with the sanction of Punjab Government, and 2.83 acres turned into gardens, as they were actually used as such.
Jhelam	11.09	2.31	...	13.40	
Gujránwála	170.88	0.39	(d) 45.15	126.12	
Gurgáon	2.10	...	(e) 0.62	1.48	
Amritsar	22.77	1.67	...	24.44	(d) 45 acres transferred to plantations.
Amritsar Municipality	7.34	...	...	7.34	(e) 0.62 of an acre transferred to Delhi Provincial Division.
Delhi	0.68	0.51	0.44	0.75	
Jullundur	7.48	0.20	0.55	7.13	
Ludhiána	4.03	0.21	(f) 0.33	3.91	(f) Transferred to groves.
Ráwalpindí	14.21	0.07	(g) 14.21	0.07	(g) The exclusion of 14.21 acres is due to the transfer of Attock Tahsil to Hazára District and the closing of Samli garden where a nursery for fruit trees was formerly maintained.
Ráwalpindí Municipality	1.69	0.09	...	1.78	
Gujrát	2.19	10.05	10.01	2.23	
Gujrát Municipality	Nil.	Nil.	Nil.	Nil.	
Gurdáspur	3.95	...	0.25	3.70	
Umballa	1.62	(h) 0.40	0.01	2.01	(h) Column 3 includes 0.11 of an acre due to correction of previous returns.
Siálkot	9.18	4.03	2.95	10.26	
Hoshiárpur	9.48	1.26	0.13	10.61	
Simla	8.00	...	...	8.00	
Kángra	2.38	0.40	...	2.78	
Kángra Municipality	10.42	0.30	...	10.72	
Total 1899-1900 to 1901-02	494.41	41.59	135.18	400.82	
*Total 1896-97 to 1898-99	512.67	93.85	118.00	488.52	

* Excluding the Districts transferred to North-West Frontier Province, and Miánwáli District, for which separate figures are not available.

Statement No. I (b).

Progress Statement of Nurseries in the Canal Divisions for the Triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	Area added during the period.	Area given up or transferred to groves during the period.	Area remaining at end of the triennial period.	REMARKS
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Bári Doáb Canal, 1st Division	Nil.	Nil.	Nil.	Nil.	
Bári Doáb Canal, 2nd Division	Nil.	Nil.	Nil.	Nil.	
Bári Doab Canal, 3rd Division	0·60	1·40	...	2·00	
Upper Sutlej Division, Inundation Canals.	0·36	1·16	(a) 1·42	0·10	(a) Transferred to Plantations.
Multán Canals Division ...	10·74	(b) 34·20	(b) 35·98	9·01	(b) The area in column 3 includes 29·42 acres purchased from the Multán District Board, and that in column 4, 29·42 acres transferred to Plantations.
Dera Gházi Khan Division, Indus Canals.	3·25	0·60	0·20	3·65	(c) The entry in column 4 includes 0·30 acres transferred to Hissár Division, and 0·27 on account of nursery given up.
Muzaffargarh Canals Division.	Nil.	Nil.	Nil.	Nil.	
Lower Sutlej Inundation Canals Division.	Nil.	Nil.	Nil.	Nil.	
Western Jumna Canal, Karnál Division.	2·94	5·57	(c) 6·13	2·38	(d) The entry in column 3 includes 0·30 of an acre received by transfer from Hissár Division, and that in column 4, 28·55 acres transferred to Plantations.
Western Jumna Canal, Delhi Division.	3·19	34·00	11·84	25·35	(e) 12·13 acres transferred to Plantations.
Western Jumna Canal, Hissár Division.	6·21	(d) 36·70	(d) 38·08	4·83	(f) Includes 1·36 acres equal to a length of 10 miles transferred to avenues.
Sirhind Canal, Ferozepore Division.	1·70	...	1·70	...	
Sirhind Canal, Ludhiána Division.	10·50	4·02	(e) 12·13	2·39	(g) The entry in column 4 includes 0·01 of an acre transferred to Upper Gugera Division, Chenáb Canal, and 0·25 to Plantations.
Sirhind Canal, Patiala Division	2·98	11·00	(f) 11·36	2·62	(h) Transferred to Plantations.
" Bhatinda Division.	...	1·87	1·87	...	(i) The area in column 3 includes 0·07 of an acre received from Jhang Division, Chenáb Canal and that in column 4 includes 29·41 acres transferred to Plantations.
Chenáb Canal, Khánki Division	0·72	1·92	(g) 0·26	2·38	(j) The area in column 3 includes 0·01 received by transfer from the Khánki Division, Chenáb Canal, while that in column 4 includes 0·50 of an acre transferred to Jhang Division, Chenáb Canal, and 4·70 acres given up.
Chenáb Canal, Lyallpur Division.	4·56	...	(h) 4·56	...	(k) The area in column 3 (0·50 of an acre) has been received by transfer from the Upper Gugera Division, Chenáb Canal, while that in column 4 includes 0·07 acres transferred to Lower Gugera Division, 0·50 acres transferred to Plantations.
Chenáb Canal, Lower Gugera Division.	...	(i) 36·70	(i) 35·97	0·73	
Chenáb Canal, Upper Gugera Division.	1·15	(j) 4·45	(j) 5·20	0·40	
Chenáb Canal, Jhang Division	0·07	(k) 0·50	(k) 0·57	...	
Swát River Canals Division ...	1·07	1·09	(l) 1·16	1·00	(l) 1·16 acres transferred to Plantations.
Jhelum Canal, 1st Division ...	2·00	6·00	(m) 7·50	0·50	(m) The area of 7 acres was dug up as the Canal main line went through it.
" 2nd Division ...	...	15·41	(n) 6·91	8·50	(n) 6·91 acres transferred to Plantations.
" 3rd Division ...	...	10·00	...	10·00	
Jhelum Inundation Canals Division.	Nil.	Nil.	Nil.	Nil.	
Total 1899-1900 to 1901-02	52·04	206·59	182·79	75·84	
Total 1896-97 to 1898-99...	65·45	72·20	85·61	52·04	

Statement No. I (c).

*Progress Statement of Nurseries in the Provincial Divisions for the Triennial period
1899-1900 to 1901-02.*

1	2	3	4	5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	Area added during the period.	Area given up or transferred to groves during the period.	Area remaining at end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Rawalpindi Division ...	1.35	0.54	0.02	1.87	
Simla Division ...	Nil.	Nil.	Nil.	Nil.	
Kangra Division ...	0.55	...	(a) 0.55	...	(a) The area in column 4 includes 0.07 acre transferred to Amritsar Provincial Division; 0.48 acre transferred to groves.
Lahore Division ...	5.96	2.38	(b) 2.67	5.67	(b) The area in column 4 includes 0.59 acre transferred to the Amritsar Provincial Division; 2.01 acres transferred to groves.
Amritsar Division ...	...	(c) 1.60	(c) 1.10	0.50	(c) The entry in column 3 includes 0.59 of an acre received by transfer from the Lahore Provincial Division and 0.07 from the late Ludhiana (now Kangra) Division, while that in column 4 includes 0.54 of an acre transferred to Plantations.
Lyallpur Division ...	0.74	...	(d) 0.74	...	(d) Abandoned.
Shahpur Division ...	Nil.	Nil.	Nil.	Nil.	
Dera Ghazi Khan Division ...	1.27	0.20	1.33	0.14	
Amballa Division ...	0.76	...	0.53	0.23	
Delhi Division ...	0.45	(e) 1.62	0.45	1.62	(e) 0.62 acre received by transfer from Gurgáon District, Civil Department.
Total 1899-1900 to 1901-02	11.08	6.34	7.39	10.03	
* Total 1896-97 to 1898-99	13.16	9.75	11.83	11.08	* Excluding the figures for the Divisions transferred to the North-West Frontier Province.

Statement No. II (a).

Progress Statement of Plantations in the Districts for the triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6	7
DISTRICT.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	Area sown or planted during the period.	Area of failures during the period.	Area stocked at the end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Dera Gházi Khan	1,677·00	60·00	...	...	60·00	
Miánwáli	126·00	127·80	1,920·58	320·14	1,728·24	
Jhang	244·29	244·29	...	...	244·29	
Hissár	139·66	83·23	...	...	83·23	
Ferozepore	423·00	230·00	67·00	11·00	286·00	
Gujránwála	...	...	45·00	...	45·00	Received by transfer from nurseries.
Gurgáon	1,670·59	44·81	...	...	44·81	
Amritsar Municipality ...	...	1·00	...	1·00	...	Cut and sold.
Delhi	863·65	561·66	8·00	60·28	509·38	The entry in column 4 includes 3 acres received by transfer from Western Jumna Canal, Delhi Division.
Delhi Municipality	938·73	938·73	...	...	938·73	
Jullundur	101·61	101·61	21·13	...	122·74	
Gujrát	0·58	0·58	...	0·58	...	
Gurdáspur	25·80	25·80	...	...	25·80	
Siálkot Municipality ...	2·00	2·00	...	...	2·00	
Simla	57·50	57·50	...	...	57·50	
Kángra	...	...	57·78	...	57·78	Transferred from groves.
Kángra Municipality ...	137·75	122·30	2·16	2·16	122·30	
Total 1899-1900 to 1901-02...	6,408·16	2,601·31	2,123·12	395·16	4,323·27	
* Total 1896-97 to 1898-99 ...	6,363·52	2,290·34	379·85	196·68	2,473·51	

* Excluding the Districts transferred to North-West Frontier Province, and Miánwáli District, for which separate figures are not available.

There are no plantations in the following Districts:—

Muzaffargarh, Multán, Montgomery, Sháhpur, Rohtak, Lahore, Karnál, Jhelam, Ludhiána, Ráwalpindi, Ambala and Hoshiárpur.

Statement No. II (b).

Progress Statement of Plantations in the Canal Divisions for the triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6	7
DIVISION.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	Area sown or planted during the period.	Area of failure during the period.	Area stocked at the end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Bári Doáb Canal, 1st Division.	3,564'00	2,042'45	86'09	(a) 587'00	1,541'54	(a) Transferred to 2nd Division, Bári Doáb Canal.
Bári Doáb Canal, 2nd Division.	1,441'06	1,441'06	(b) 601'20	(b) 379'97	1,662'29	(b) The entry in column 4 includes 587 acres received by transfer from Bári Doáb Canal, 1st Division, and that in column 5 represents the area transferred to Bári Doáb Canal, 3rd Division.
Bári Doáb Canal, 3rd Division.	1,467'73	1,047'26	(c) 420'47	...	1,467'73	(c) Includes 379'97 acres received by transfer from Bári Doáb Canal, 2nd Division.
Upper Sutlej Division, Inundation Canals.	51'26	51'26	(d) 5'09	3'00	53'35	(d) The area in column 4 includes 1'42 acres received by transfer from nurseries.
Multan Canals Division.	169'84	108'45	(e) 33'10	...	141'55	(e) Includes 29'42 acres received by transfer from nurseries.
Dera Gházi Khan Division, Indus Canals.	14'37	14'37	0'94	3'20	7'11	(f) The entry in column 5 is due to correction of previous errors.
Muzaffargarh Canals Division.	19'19	17'76	0'90	(f) 3'44	15'22	(g) The entry in column 5 includes 44'82 acres due to the exclusion of the areas under buildings, vegetable gardens and bare ground, &c., in all Canal Chaunki compounds heretofore returned as area under plantations.
Lower Sutlej Inundation Canals Division.	65'86	65'86	...	(g) 45'42	20'44	(h) The entries in columns 3 and 5 include 0'25 of an acre received from late Jhind Independent Sub-Division and transferred to Hissár Division.
Western Jumna Canal, Karnál Division.	1,180'50	(h) 1,019'45	49'58	(h) 30'52	1,038'51	(i) The entry in column 5 includes 3 acres transferred to the Civil Department and 4 acres due to correction of previous errors.
Western Jumna Canal, Delbi Division.	1,503'43	1,267'47	138'76	(i) 17'64	1,388'59	(j) The entry in column 4 includes 28'55 acres transferred from nurseries and 0'25 of an acre from Karnál Division, and 5'56 acres from the Civil Department.
Western Jumna Canal, Hissár Division.	319'34	187'75	(j) 220'29	157'85	250'19	(k) Includes 460'80 acres transferred to Bhatinda Division.
Sirhind Canal, Ferozepore Division.	3,255'68	2,458'47	47'67	(k) 509'71	1,996'43	(l) The entry in column 4 includes 12'13 acres received by transfer from nurseries and that in column 5 includes 689'25 acres transferred to Bhatinda Division.
Sirhind Canal, Ludhiána Division.	5,383'00	4,719'58	(l) 51'45	(l) 818'50	3,952'53	(m) The entry in column 5 includes 1'36 acres which were excluded from the figures wrongly entered in the return for 1899-1900.
Sirhind Canal, Patialá Division.	3,925'85	2,630'99	88'37	(m) 42'36	2,677'00	(n) The entry in column 4 includes 689'25 acres transferred from Ludhiána Division and 460'80 transferred from Ferozepore Division.
Sirhind Canal, Bhatinda Division.	2,087'00	...	(n) 1,182'12	16'15	1,165'97	(o) The entry in column 4 includes 0'25 of an acre received by transfer from nurseries and that in column 5, 2 acres transferred to Upper Gugerá Division.
Chenáb Canal, Khánki Division.	1,141'68	885'92	(o) 283'76	(o) 300'10	869'58	

STATEMENT No. II (b)—concluded.

Progress Statement of Plantations in the Canal Divisions for the triennial period 1899-1900 to 1901-02—concluded,

1	2	3	4	5	6	7
DIVISION.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	Area sown or planted during the period.	Area of failures during the period.	Area stocked at the end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Chenáb Canal, Lyallpur Division.	369'66	369'66	(p) 139'27	(p) 159'80	349'13	(p) The area in column 4 includes 4'56 acres transferred from nurseries and 29'48 acres from the Upper Gugera Division, and that in column 5 includes 104'20 acres transferred to Upper Gugera Division.
Chenáb Canal, Lower Gugera Division.	152'23	8'60	(q) 143'83	(q) 31'25	121'18	(q) The entry in column 4 includes 29'41 acres received by transfer from nurseries and 3'30 acres from the Jhang Division, Chenáb Canal, while that in column 5 includes 5'05 acres transferred to the Upper Gugera Division, Chenáb Canal.
Chenáb Canal, Upper Gugera Division.	798'84	98'47	(r) 700'37	(r) 244'94	553'90	(r) The entry in column 4 includes 104'20 acres received by transfer from Lyallpur Division, Chenáb Canal.
Chenáb Canal, Jhang Division.	1,171'75	184'30	(s) 446'56	(s) 153'86	477'00	(s) The entry in column 4 includes 5'05 acres received by transfer from Lower Gugera Division, Chenáb Canal.
Swát River Canals Division.	204'00	125'78	(t) 80'03	20'10	203'71	(t) The entry in column 4 includes 2'00 acres received by transfer from Khánki Division, Chenáb Canal, while that in column 5 includes 29'48 acres transferred to Lyallpur Division, Chenáb Canal.
Jhelam Canal, 1st Division.	Nil.	Nil.	40'50	33'00	7'50	(u) The entry in column 4 includes 3'40 acres transferred to Jhang Division, Chenáb Canal.
Jhelam Canal, 2nd Division.	...	Nil.	(u) 133'35	43'05	90'30	(s) The entry in column 4 includes 53'40 acres received by transfer from Upper Gugera Division, Chenáb Canal, and 37'70 acres not shown in previous returns, while that in column 5 includes 3'30 acres transferred to Lower Gugera Division, Chenáb Canal, and 0'30 of an acre on account of correction of previous returns.
Jhelam Canal, 3rd Division.	40'00	Nil.	30'00	5'00	25'00	(t) The entry in column 4 includes 1'16 acres received by transfer from nurseries.
Jhelam Inundation Canals Division.	Nil.	Nil.	Nil.	Nil.	Nil.	(u) The entry in column 4 includes 6'91 acres transferred from nurseries.
Total 1899-1900 to 1901-02.	28,326'27	18,744'91	4,923'70	3,592'86	20,075'75	
Total 1896-97 to 1898-99.	25,811'61	17,393'96	2,742'51	1,391'56	18,744'91	

Statement No. II (c).

Progress Statement of Plantations in the Provincial Divisions for the triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6	7
DIVISION.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	Area sown or planted during the period.	Area of failures during the period.	Area stocked at the end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Kāngra Division ...	...	0·55	92·15	(a) 9·64	88·06	(a) The entry in column 5 includes 0·55 acre transferred to Amritsar Division.
Amritsar Division ...	...	...	(b) 1·09	0·82	0·27	(b) The area in column 4 includes 0·55 of an acre received by transfer from the late Ludhiāna (now Kāngra) Division and 0·54 of an acre from nurseries.
There are no plantations in the following Divisions:— Rāwalpindi, Simla, Lahore, Lyallpur, Shahpur, Dera Ghāzi Khan, Ambala and Delhi.						
Total 1899-1900 to 1901-02.	...	0·55	93·24	10·46	83·33	
* Total 1896-97 to 1898-99.	...	...	6·44	5·89	0·55	* Excluding the figures for the Divisions transferred to the North-West Frontier Province.

Statement No. III (a).

Progress Statement of Groves in the Districts for the triennial period 1899-1900 to 1901-1902.

1	2	3	4	5	6
DISTRICT.	Area of groves at the beginning of the triennial period.	Area planted or transferred from nurseries during the period.	Area of failures during the period.	Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Muzaffargarh	242·85	25·75	0·28	268·32	
Multán	6·23	0·06	0·16	6·13	0·06 acre added owing to correction of previous returns,
Dera Gházi Khan	10·00	...	...	10·00	
Miánwáli	7·04	960·02	320·02	647·04	
Montgomery	746·00	...	...	746·00	
Jhang	48·11	8·08	...	56·14	Received by transfer from nurseries.
Jhang Municipality	4·09	...	...	4·09	
Sháhpur	1,014·50	52·35	33·90	1,032·95	The entry in column 3 includes 0·04 of an acre due to correction of previous returns.
Hissár	338·45	...	5·56	332·89	Area of Sirsa Nazúl Garden transferred to Canal Department during June 1901.
Hissár Municipality	8·37	...	...	8·37	
Ferozepore	421·04	2·00	31·50	391·54	
Rohtak	543·94	...	...	543·94	
Lahore	16·73	...	...	16·73	
Karnál	318·03	32·76	...	350·79	
Jhelam	5·62	...	...	5·62	
Gujránwála	1·51	...	...	1·51	
Gurgáon	282·02	...	...	282·02	
Amritsar	46·37	1·50	0·10	47·77	
Amritsar Municipality	1·75	...	...	1·75	
Delhi	16·23	5·27	1·11	20·39	
Delhi Municipality	1·50	...	...	1·50	
Jullundur	25·68	0·55	0·20	26·03	
Ludhiápa	187·70	0·33	...	188·03	Transferred from nurseries.
Ráwalpindi	360·15	18·05	160·15	218·05	The decrease is due to the transfer of Ráwalpindi Park to the Cantonment authorities and Attock Tahsil to Hazára District.
Ráwalpindi Municipality	15·21	...	...	15·21	
Gujrát	187·09	0·48	3·20	184·37	
Gujrát Municipality	3·52	...	...	3·52	
Gurdáspur	15·89	0·12	0·25	15·76	0·23 acre excluded owing to correction of previous returns.
Umballa	18·25	...	0·04	18·21	
Umballa Municipality	...	13·62	...	13·62	Received by transfer from Simla District.
Siálkot	14·18	1·50	...	15·68	
Hoshiárpur	15·23	1·00	...	16·23	Received by correction of previous returns.
Simla	13·62	...	13·62	...	Transferred to Umballa District.
Kángra	78·28	...	57·78	20·50	Transferred to plantations being the area of Dák Bungalow Hill plantation at Núrpur.
Kángra Municipality	Nil.	Nil.	Nil.	Nil.	
Total 1899-1900 to 1901-1902 ...	5,015·18	1,123·39	627·87	5,510·70	
*Total 1896-1897 to 1898-1899 ..	5,396·62	153·34	541·82	5,008·14	

* Excluding the districts transferred to North-West Frontier Province, and Miánwáli District, for which separate figures are no available.

Statement No. III (c).

Progress Statement of Groves in the Provincial Divisions for the triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6
DIVISION.	Area of groves at the beginning of the triennial period.	Area planted or transferred from nurseries during the period.	Area of failures during the period.	Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Ráwalpindi Division	217·27	...	...	217·27	
Simla Division	Nil.	Nil.	Nil.	Nil.	(a) 0·48 acre received by transfer from nurseries. The area in column 4 (43·88 acres) has been transferred to Amritsar Provincial Division.
Kángra Division	43·88	(a) 0·48	(a) 43·88	0·48	(b) Transferred from nurseries.
Lahore Division	478·51	(b) 2·01	0·28	480·24	
Amritsar Division	Nil.	(c) 43·88	41·13	2·75	(c) 43·88 acres in column 3 received by transfer from the late Ludhiána (now Kángra) Division.
Lyallpur Division	268·65	(d) 6·13	(d) 4·42	270·36	(d) The entry in column 3 includes 1·70 acres received by transfer from the Dera Gházi Khan Provincial Division and 0·01 due to correction of returns, while the area of 4·42 acres in column 4 has been excluded in rectification of the same area added by mistake in 1900-01.
Shahpur Division	Nil.	Nil.	Nil.	Nil.	
Dera Gházi Khan Division	4·66	...	(e) 1·70	2·96	(e) 1·70 acres transferred to the Lyallpur Provincial Division.
Ambala Division	Nil.	Nil.	Nil.	Nil.	
Delhi Division	Nil.	Nil.	Nil.	Nil.	
Total 1899-1900 to 1901-02	1,012·97	52·50	91·41	974·06	
* Total 1896-97 to 1898-99	1,010·51	512·79	510·33	1,012·97	*Excluding the figures for the Divisions transferred to the North-West Frontier Province.

Statement No. IV (a).

Progress Statement of Avenues in the Districts for the Triennial period 1899-1900 to 1901-1902.

1	2	3	4	5	6	7
DISTRICT.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	Length of roads and canals planted during the period.	Length of roads and canals which have failed during the period.	Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
	<i>Miles and decimals.</i>	<i>Miles and decimals.</i>	<i>Miles and decimals.</i>	<i>Miles and decimals.</i>	<i>Miles and decimals.</i>	
Muzaffargarh ...	295·85	120·70	5·54	...	126·24	(a) The entry in column 4 includes 52·70 miles of two District Board roads in Tahsil Maisi, the management of which has now been given up by the Forest Department after disposal of the trees in the forest lying along the roads, and 91·93 miles of roads which were omitted from previous returns. The entry in column 5 includes 3·17 miles transferred to Dera Ghazi Khan Provincial Division.
Multan ...	1,253·28	233·93	(a) 160·23	(a) 69·76	324·40	
Dera Ghazi Khan ...	105·15	35·00	...	(b) 4·85	30·15	(b) Transferred to Dera Ghazi Khan Provincial Division.
Mianwali ...	217·00	20·04	8·41	2·90	25·55	(c) The entry in column 5 includes 0·52 of a mile due to correction of previous errors.
Montgomery ...	250·00	133·00	...	...	133·00	
Jhang ...	1,730·00	74·60	41·40	1·90	115·00	(d) 0·06 of a mile in column 5 due to correction of previous errors.
Jhang Municipality ...	48·09	21·82	...	...	21·82	
Shahpur ...	541·12	528·71	32·57	(c) 38·73	522·55	(e) The entry in column 4 includes 2·09 miles transferred from Lahore Provincial Division.
Shahpur Municipality	16·89	16·89	0·05	(d) 0·06	16·88	(f) 29·32 miles in column 5 includes 28 miles transferred to the Delhi Provincial Division.
Hissar ...	393·81	103·05	...	...	103·05	
Hissar Municipality,	5·59	5·21	...	...	5·21	(g) The entry in column 5 includes 13·50 miles transferred with Attock Tahsil to Hazara District.
Ferozepore ...	733·84	526·00	(e) 31·50	28·75	528·75	
Rohtak ...	415·08	201·18	...	...	201·18	(h) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Lahore ...	413·41	229·94	15·50	...	245·44	
Lahore Municipality,	56·39	53·68	...	...	53·68	(i) Transferred to Umballa District.
Karnal ...	339·70	112·73	2·86	1·00	114·59	
Karnal Municipality,	8·23	8·23	...	0·50	7·73	(j) Transferred to Umballa District.
Jhelam ...	459·01	334·27	26·02	6·78	353·51	
Jhelam Municipality,	16·52	19·40	1·83	6·45	20·78	(k) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Gujranwala ...	521·38	177·01	12·25	2·50	186·76	
Gurgaoon ...	396·15	259·45	...	(f) 29·32	230·13	(l) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Amritsar ...	278·98	177·28	54·56	22·54	209·30	
Amritsar Municipality,	66·00	51·41	18·03	11·35	58·09	(m) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Delhi ...	349·05	161·43	14·54	19·95	156·02	
Delhi Municipality ...	38·00	25·00	...	...	25·00	(n) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Jullundur ...	283·80	234·93	...	...	234·93	
Ludhiana ...	291·81	199·81	22·75	...	222·56	(o) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Rawalpindi ...	998·43	323·76	26·34	(g) 25·13	324·97	
Rawalpindi Municipality,	11·61	10·46	...	...	10·46	(p) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Gujrat ...	611·00	414·48	58·24	36·91	435·81	
Gujrat Municipality,	10·85	7·72	3·80	1·81	9·71	(q) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Gurdaspur ...	610·00	489·57	10·05	13·59	486·03	
Umballa ...	277·96	154·14	(h) 53·66	53·00	154·80	(r) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Sialkot ...	842·50	574·87	24·25	17·75	581·37	
Sialkot Municipality,	6·50	5·75	...	...	5·75	(s) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Hoshiarpur ...	513·16	463·60	31·75	7·50	487·75	
Simla ...	...	5·16	...	(i) 5·16	...	(t) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Kangra ...	501·59	421·00	77·27	43·99	454·28	
Dharmasala Municipality,	6·35	6·35	...	...	6·35	(u) The entry in column 4 includes 5·16 miles received by transfer from Simla District.
Total 1899-00 to 1901-1902.	13,914·08	6,941·46	733·40	445·28	7,229·58	
*Total 1896-97 to 1898-1899.	12,258·24	6,647·88	643·44	369·90	6,921·42	

* Excluding the Districts transferred to North-West Frontier Province, and Mianwali District, for which separate figures are not available.

Statement No. IV (b).

Progress Statement of Avenues in the Canal Divisions for the triennial period 1899-1900.
to 1901-02.

1	2	3	4	5	6	7
DIVISIONS.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	Length of roads and canals planted during the period.	Length of roads and canals which have failed during the period.	Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	
Bári Doáb Canal, 1st Division.	179.70	166.76	3.40	(a) 24.00	146.16	(a) Transferred to 2nd Division, Bári Doáb Canal.
Bári Doáb Canal, 2nd Division.	87.60	103.06	24.00	(b) 39.46	87.60	(b) The entry in column 4 relates to the length received by transfer from Bári Doáb Canal, 1st Division, and that in column 5 includes 20.20 miles transferred to Bári Doáb Canal, 3rd Division, 19.26 miles excluded by correction of returns.
Bári Doáb Canal, 3rd Division.	93.20	73.20	28.60	(c) 8.60	93.20	(c) 20.20 miles received by transfer from Bári Doáb Canal, 2nd Division, and 0.20 of a mile excluded owing to correction of previous returns.
Upper Sutlej Division, Inundation Canals.	514.71	322.77	13.70	4.20	332.27	(d) Decrease is due to canal banks having been cleared for inspection purposes, to cutting of trees for fuel, for burning bricks, &c., and to the abandonment of old channels and excavation of new ones instead.
Multan Canals Division.	394.30	277.27	22.70	7.60	292.37	(e) The entries in columns 3 and 4 include 25.37 and 16.10 miles, respectively, belonging to the late Jhind Independent Sub-Division, while the entry in column 5 includes 30.07 miles written off as abandoned. The net addition received by the Karnál Division was therefore 11.40 miles only.
Dera Gházi Khan Division, Indus Canals.	396.51	173.66	18.09	4.16	187.59	(f) The entry in column 3 includes 14.13 miles received from the late Jhind Independent Sub-Division.
Muzaffargarh Canals Division.	220.70	23.98	124.14	Nil.	148.12	(g) 35.40 miles transferred to Bhatinda Division.
Lower Sutlej Inundation Canals Division.	542.46	398.50	...	(d) 147.50	251.00	(h) 17.71 miles transferred to Bhatinda Division.
Western Jumna Canal, Karnál Division.	543.73	(e) 249.24	(e) 75.52	(e) 82.72	242.04	(i) 1.36 acres equal to a length of 10 miles received by transfer from nurseries.
Western Jumna Canal, Delhi Division.	519.54	270.19	75.92	37.30	308.81	(j) Transferred from— Ludhiána Division 17.71 miles, Ferozepore Division 35.40 „
Western Jumna Canal, Hissár Division.	318.39	(f) 188.27	61.17	(g) 60.69	188.75	53.11
Sirhind Canal, Ferozepore Division.	261.20	195.43	0.60	(h) 39.40	156.63	(k) The entry in column 4 includes 111 miles received by transfer from the Upper Gugera Division, and that in column 5 includes 51 miles transferred to that Division.
Sirhind Canal, Ludhiána Division.	252.40	189.12	1.16	(h) 19.31	170.97	(l) The entry in column 4 includes 1 mile received by transfer from the Jhang Division, Chenáb Canal, while that in column 5 includes 69.20 miles transferred to the Upper Gugera Division, Chenáb Canal.
Sirhind Canal, Patiala Division.	221.74	154.14	(i) 12.10	...	166.24	(m) The entry in column 4 includes 51 miles transferred from Lyallpur Division, Chenáb Canal, 69.20 miles transferred from Lower Gugera Division, Chenáb Canal, while that in column 5 includes 111 miles transferred to Lyallpur Division, 98 miles transferred to Jhang Division.
Sirhind Canal, Bhatinda Division.	126.20	...	(j) 57.11	...	57.11	(n) The entry in column 4 includes 98 miles received by transfer from the Upper Gugera Division, Chenáb Canal, while that in column 5 includes 1 mile transferred to the Lower Gugera Division.
Chenáb Canal, Khán-ki Division.	175.19	96.56	20.10	4.10	112.56	
Chenáb Canal, Lyallpur Division.	428.20	111.30	(k) 155.71	(k) 55.90	211.11	
Chenáb Canal, Lower Gugera Division.	451.78	69.20	(l) 66.49	(l) 111.10	24.59	
Chenáb Canal, Upper Gugera Division.	638.22	236.91	(m) 363.25	(m) 272.88	327.28	
Chenáb Canal, Jhang Division.	566.90	38.57	(n) 228.33	(n) 128.30	138.60	
Swát River Canals Division.	286.00	178.24	71.89	21.80	228.33	
Jhelum Canal, 1st Division.	6.50	Nil.	3.00	...	3.00	
Jhelum Canal, 2nd Division.	409.60	...	180.00	40.00	140.00	
Jhelum Canal, 3rd Division.	127.50	Nil.	50.00	25.00	25.00	
Jhelum Inundation Canals Division.	270.96	64.26	2.00	...	66.26	
Total 1899-1900 to 1901-02.	8,033.23	3,580.63	1,658.98	1,134.02	4,105.59	
Total 1896-97 to 1898-99.	6,455.19	2,995.90	1,586.95	1,002.22	3,580.63	

Statement No. IV (c).

Progress Statement of Avenues in the Provincial Divisions for the triennial period
1899-1900 to 1901-02.

1	2	3	4	5	6	7
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	Length of roads and canals planted during the period.	Length of roads and canals which have failed during the period.	Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	
Rāwalpindi Division	234.66	89.95	1.39	0.46	90.88	
Simla Division ...	0.34	0.34	...	...	0.34	
Kāngra Division ...	188.97	141.44	5.66	(a) 127.36	19.74	(a) The entry in column 5 includes 124.72 miles transferred to Amritsar Division.
Lahore Division ...	193.26	154.67	(b) 35.49	(b) 67.28	122.88	(b) The entry in column 4 includes 15.57 miles received by transfer from Dera Ghāzi Khan Provincial Division and that in column 5 545.67 miles transferred to Amritsar Division. 10.00 miles transferred to Lyallpur (late Gujranwāla) Division. 2.09 miles of station roads transferred to Deputy Commissioner, Ferozepore. 5.55 miles due to correction of previous errors.
Amritsar Division ...	199.20	Nil.	(c) 178.39	4.98	173.41	(c) The entry in column 4 includes 124.72 miles received by transfer from the late Ludhiāna (now Kāngra) Division and 45.67 miles from the Lahore Division.
Lyallpur Division ...	159.63	89.70	(d) 20.50	3.10	107.10	(d) The entry in column 4 includes 10 and 2.75 miles received by transfer from the Lahore and Dera Ghāzi Khan Provincial Divisions respectively.
Shahpur Division ...	Nil.	Nil.	Nil.	Nil.	Nil.	
Dera Ghāzi Khan Division.	136.60	80.97	(e) 16.83	(e) 27.31	70.49	(e) The entry in column 4 includes 4.85 and 3.17 miles received by transfer from the Dera Ghāzi Khan and Multan District Boards, respectively, while that in column 5 includes 1 mile washed away by river Indus.
Ambala Division ...	198.65	157.86	4.65	1.60	160.91	
Delhi Division ...	213.25	97.75	(f) 32.36	0.36	129.75	(f) The entry in column 4 includes 28 miles received by transfer from the District Board of Gurgāon.
Total 1899-1900 to 1901-02.	1,518.56	812.68	295.27	232.45	875.50	
*Total 1896-97 to 1898-99.	1,295.93	791.40	565.69	544.41	812.68	*Excluding the figures for the Divisions transferred to the North-West Frontier Province.

Statement No. V (a).

Income from Arboriculture in the District during the triennial period 1899-1900 to 1901-1902.

1	2	3	4	5	6	7	8
DISTRICT.	Orna mental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh	1,730	111	...	12,886	1,097	15,824	
Multan	6,555	2,746	...	3,984	208	13,493	
Dera Ghazi Khan	1,169	...	...	1,012	...	2,181	
Mianwali	1,511	1	...	633	740	2,885	
Montgomery	2,553	...	...	1,418	...	3,971	
Jhang	2,035	...	2,425	1,585	617	6,662	
Jhang Municipality	1,076	...	841	1,320	...	3,237	
Shahpur	5,160	3,230	...	16,359	6,491	31,240	
Hissar	1,847	...	...	1,346	...	3,193	
Hissar Municipality	1,543	...	212	927	40	2,722	
Ferozepore	...	...	1,300	14,748	...	16,048	
Rohtak	1,375	...	...	2,001	44	3,420	
Lahore	11,222	...	...	9,522	...	20,744	
Lahore Municipality	19,663	...	...	944	9,686	30,293	
Karnal	...	85	...	1,481	1,323	2,889	
Jhelam	5,757	...	...	...	5,004	11,421	
Gujranwala	3,740	152	...	5,626	134	9,652	
Gurgaon	181	10	295	4,677	..	5,163	
Amritsar	896	172	...	7,560	...	8,628	
Amritsar Municipality	14,237	...	...	5,590	6,954	26,781	
Delhi	1,374	...	4,998	3,040	...	9,412	
Delhi Municipality	34,543	...	14,359	252	1,012	50,166	
Jalandhar	2,290	602	340	15,268	744	19,244	
Ludhiana	761	1,126	...	16,046	...	17,933	
Rawalpindi	4,703	...	...	3,555	...	8,258	
Rawalpindi Municipality	2,956	...	...	2,292	27	5,275	
Gujrat	758	...	11	26,470	337	27,576	
Gujrat Municipality	341	...	...	1,192	...	1,533	
Gurdaspur	5,228	606	1,482	15,940	2,218	25,474	
Imbilla	1,033	34	...	7,828	...	8,895	
Sialkot	5,943	...	...	70,722	867	77,532	
Hoshiarpur	2,602	...	...	16,266	5,032	23,900	
Simla	12,694	651	8,970	...	...	22,315	
Kangra	747	...	...	2,792	...	3,539	
Kangra Municipality	...	72	49	...	..	121	
Total 1899-1900 to 1901-02 ...	1,58,223	9,598	35,282	2,75,282	43,235	5,21,620	
* Total 1896-97 to 1898-99 ...	1,53,964	4,081	27,248	2,92,728	27,663	5,05,684	

* Excluding the districts transferred to North-West Frontier Province, and Mianwali District, for which separate figures are not available.

Statement No. V (l).

Income from Arboriculture in the Canal Divisions during the triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bári Doab Canal, 1st Division ...	43	...	18,798	1,737	5,370	25,948	(a) Income is on account of sale of dead trees, &c., but detailed account has not been kept,
Do., 2nd do. ...	32	...	13,139	...	9,700	22,871	
Do., 3rd do. ...	...	...	6,571	...	7,074	13,645	
Upper Sutlej Division, Inundation Canals.	...	...	(a) 6,616	...	...	6,616	
Multán Canals Division ...	50	...	119	15,017	871	16,057	
Dera Gházi Khan Division, Indus Canals.	...	...	11	6,406	92	6,509	
Muzaffargarh Canals Division ...	...	...	18,995	...	...	18,995	
Lower Sutlej Inundation Canals Division.	3	...	189	13,298	268	13,758	
Western Jumna Canal, Karnál Division.	829	...	4,896	...	41	5,766	
Western Jumna Canal, Delhi Division.	...	...	7,840	...	2,776	10,616	
Western Jumna Canal, Hissár Division.	...	...	9,163	...	1,569	10,732	
Sirhind Canal, Ferozepore Division	...	...	2,818	...	4,093	6,911	
Do., Ludhiána do.	55	68	8,219	2,377	17,645	28,364	
Do., Patiala do.	369	...	9,344	...	9,291	19,004	
Do., Bhatinda do.	68	...	3,642	...	2,664	6,374	
Chenáb Canal, Khánki Division...	...	...	392	...	301	693	
Do., Lyallpur do. ...	20	...	436	133	...	569	
Do., Lower Gugera Division.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Do., Upper Gugera Division.	141	...	191	12	...	344	
Do., Jhang Division ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Swát River Canals Division ...	...	...	1,363	3,586	...	4,949	
Jhelam Canal, 1st Division ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Do., 2nd do. ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Do., 3rd do. ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Jhelam Inundation Canals Division	Nil.	Nil.	Nil.	2,925	47	2,972	
Total 1899-1900 to 1901-02 ...	1,610	68	1,12,742	45,491	61,802	2,21,713	
Total 1896-97 to 1898-99 ...	1,864	Nil.	1,31,861	62,037	73,041	2,68,803	

Statement No. V (c).

Income from Arboriculture in the Provincial Divisions during the triennial period 1899-1900 to 1901-02.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rāwalpindi Division ...	296	...	...	4,139	2,870	7,305	
Simla Division ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Kāngra Division ...	...	...	130	352	627	1,109	
Lahore Division ...	213	...	...	10,277	2,818	13,308	
Amritsar Division ...	205	...	168	7,264	11,861	19,498	
Lyallpur Division ...	375	...	...	11,284	6,485	18,144	
Shahpur Division ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Dera Ghāzi Khan Division ...	...	...	...	944	226	1,170	
Ambala Division ...	...	...	...	10,569	7,862	18,431	
Delhi Division ...	...	...	...	2,271	3,007	5,278	
Total 1899-1900 to 1901-02 ...	1,089	...	298	47,100	35,756	84,243	
*Total 1896-97 to 1898-99 ...	682	5	124	41,772	34,279	76,862	*Excluding the figures for the Divisions transferred to the North-West Frontier Province.

Statement No. VI (a).

Expenditure on Arboriculture in the Districts during the triennial period 1899-1900 to 1901-02

1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	WORKS.								ESTABLISHMENT. General supervising establishment, including office establishment.	Total.
	Ornamental gardens.		Nurseries.		Plantation and afforestation.		Groves and avenues.			
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantation and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.		
Muzaffargarh ...	Rs. 4,878	Rs. ...	Rs. ...	Rs. ...	Rs. ...	Rs. ...	Rs. 8,800	Rs. 1,070	Rs. 1,800	Rs. 16,548
Multán ...	19,100	...	317	...	...	...	13,478	...	...	32,895
Dera Gházi Khan ...	...	...	...	...	2,922	...	...	...	...	2,922
Miánwáli ...	26	...	5	...	...	...	4,291	3,158	...	7,480
Montgomery ...	11,675	...	...	...	...	...	677	...	...	12,352
Jhang ...	9,335	...	...	21	350	...	10,230	1,870	2,594	24,400
Jhang Municipality	12,738	10	...	...	...	...	513	...	118	13,379
Sháhpur ...	2,707	175	180	150	...	...	7,043	7,181	2,360	19,796
Hissár ...	7,235	...	2,816	...	...	...	3,556	...	...	13,607
Hissár Municipality	3,277	...	...	...	279	...	665	...	...	4,221
Ferozepore ...	...	...	...	...	1,999	...	19,354	...	2,173	23,526
Rohtak ...	3,055	...	343	120	...	...	8,475	...	...	11,993
Lahore ...	9,608	...	...	...	...	...	4,862	1,252	1,349	17,091
Lahore Municipality	63,238	...	...	...	...	...	3,524	...	360	67,122
Karnál ...	...	...	1,608	187	...	...	8,167	261	2,214	12,437
Jhelum ...	8,905	94	...	...	...	...	...	...	8,566	17,565
Gujránwála...	10,494	...	58	...	...	...	9,581	...	2,438	22,571
Gurgáon ...	2,231	...	199	...	378	...	3,990	...	774	7,572
Amritsar ...	1,898	...	2,924	86	...	...	17,305	...	2,749	24,962
Amritsar Municipality.	53,383	...	192	...	...	...	3,011	...	4,822	61,408
Delhi ...	854	2,017	349	...	2,819	...	5,829	...	87	11,955
Delhi Municipality	53,530	...	288	...	2,626	...	5,673	...	...	62,117
Jullundur ...	7,230	...	2,447	...	235	...	9,537	...	...	19,449
Ludhiána ...	2,594	...	2,478	...	...	...	17,559	...	630	23,261
Ráwalpindi ...	3,253	...	...	30	...	...	969	26	120	4,398
Ráwalpindi Municipality.	9,150	...	...	...	...	...	1,116	...	240	10,506
Gujrát ...	3,140	...	446	...	...	...	4,622	67	1,440	9,715
Gujrát Municipality	1,074	294	...	...	...	...	646	...	...	2,014
Gurdáspur ...	4,970	...	989	...	...	...	13,085	...	...	19,044
Umballa ...	4,307	...	350	...	...	...	3,983	500	...	9,140
Siálkot ...	11,328	...	2,616	...	...	...	12,901	6,985	11,935	45,765
Hoshiárpur...	3,296	...	...	...	...	...	19,475	...	2	25,413
Simla ...	8,391	...	524	...	4,338	...	...	...	8,086	21,339
Kángra ...	2,902	...	...	...	...	...	1,715	...	...	4,617
Kangra Municipality	...	...	182	...	35	...	...	...	...	217
Total 1899-1900 to 1901-02.	3,39,802	2,590	19,311	594	15,981	...	2,24,652	22,370	57,497	6,82,797
* Total 1896-97 to 1898-99.	3,45,824	4,056	20,611	768	11,857	69	2,33,948	46,350	56,954	7,20,437

* Excluding the Districts transferred to North-West Frontier Province and Miánwáli District, for which separate figures are not available.

No. VI (b).

*Expenditure on Arboriculture in the Canal Divisions during the triennial period
1899-1900 to 1901-02.*

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	WORKS.								ESTAB- LISH- MENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantation and afforestation.		Groves and avenues.		General Supervising Establish- ment, including Office Estab- lishment.		
	Maintenance and re- pairs of existing gardens.	Extension of gardens.	Maintenance and re- pairs of existing nurseries.	Extension of nurseries.	Maintenance and re- pairs of existing plantations and afforestation.	Extension of planta- tion and affores- tation.	Maintenance and re- pairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bári Doáb Canal, 1st Division.	1,156	...	...	...	6,710	141	525	200	2,324	11,056	
Bári Doáb Canal, 2nd Division.	523	...	...	...	5,462	2,094	...	...	4,854	12,933	
Bári Doáb Canal, 3rd Division.	631	...	761	60	5,472	2,545	735	937	1,115	12,256	
Upper Sutlej Division, Inundation Canals.	...	...	...	...	...	...	...	...	...	21,329	Expenditure incurred on main ten- ance of plan- tations. De- tail by sub- heads is not kept.
Multán Canals Divi- sion.	818	557	2,676	375	9,711	2,905	2,066	1,108	669	20,885	
Dera Gházi Khan Divi- sion, Indus Canals.	...	...	246	...	2,092	...	1,949	820	86	5,193	
Muzaffargarh Canals Division.	...	...	...	...	4,429	..	...	...	...	4,429	
Lower Sutlej Inunda- tion Canals Division.	...	...	...	...	6,922	...	...	...	...	6,922	
Western Jamna Canal, Karnál Division.	9,109	172	4,066	1,340	1,153	1,452	4,008	3,116	...	24,416	
Western Jamna Canal, Delhi Division.	13,480	...	2,652	...	1,780	2,102	1,276	633	...	21,913	
Western Jamna Canal, Hissár Division.	9,622	3,440	1,333	1,844	729	1,215	2,742	1,744	...	22,669	
Sirhind Canal, Feroze- pore Division.	...	...	...	...	15,278	1,460	194	...	...	16,932	
Sirhind Canal, Lu- dhiana Division.	3,270	973	3,738	...	5,972	2,772	967	416	...	18,108	
Sirhind Canal, Patiala Division.	1,154	...	...	...	13,975	4,405	1,668	156	...	21,362	
Sirhind Canal, Bha- tiná Division.	2,603	1,178	...	...	10,026	940	...	92	...	14,839	
Chenáb Canal, Khánki Division.	...	...	336	...	3,544	2,124	2,317	1,368	8,087	18,276	
Chenáb Canal, Lyall- pur Division.	3,228	810	...	...	21,096	1,690	9,086	1,232	...	37,142	
Chenáb Canal, Lower Gugera Division.	1,091	511	81	148	2,948	4,210	107	47	2,206	11,349	
Chenáb Canal, Upper Gugera Division.	...	...	...	...	25,634	9,100	...	...	...	34,734	Further de- tails are not available.
Chenáb Canal, Jhang Division.	3,784	...	...	...	11,874	11,912	...	...	4,779	32,349	
Swát River Canals Division.	...	...	...	128	5,687	710	961	707	10,241	18,434	
Jhelam Canal, 1st Division.	...	...	...	1,559	...	3,897	...	1,706	...	7,162	
Jhelam Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	21,081	Details by sub-heads not kept.
Jhelam Canal, 3rd Division	...	...	500	...	800	...	2,363	...	600	4,263	
Jhelam Inundation Canals Division.	...	...	...	...	...	...	1,498	...	...	1,498	
Total 1899-1900 to 1901-02.	50,469	7,641	16,389	5,454	1,61,294	55,678	32,962	14,282	34,961	4,21,540	The grand total does not agree with the totals of the columns on account of some Divisions not keeping ac- counts ac- cording to sub-heads.
Total 1896-97 to 1898-99	30,808	6,117	15,039	2,593	1,19,142	47,395	44,655	41,913	12,390	3,20,052	

Statement No. VI (c).

*Expenditure on Arboriculture in the Provincial Divisions during the triennial period
1899-1900 to 1901-02.*

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantation and afforestation.		Groves and avenues.		General Supervising Establishment, including Office Establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantation and afforestation.	Extension of plantation and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
Ráwalpindi Division	Rs. 306	Rs. ...	Rs. 433	Rs. 79	Rs. ...	Rs. ...	Rs. 6,433	Rs. ...	Rs. ...	Rs. 7,251	
Simla Division ...	13,756	3,000	108	...	216	...	...	...	768	17,848	
Kángra Division ...	...	...	11	...	240	...	154	...	50	455	
Lahore Division ...	949	...	724	60	...	...	8,239	358	122	10,452	
Amritsar Division ...	562	...	20	...	2,899	153	85	...	99	3,818	
Lyallpur Division ...	440	...	...	...	...	...	8,787	77	...	9,304	
Shahpur Division ...	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	
Dera Gházi Khan Division.	...	...	...	360	...	...	4,921	200	...	5,481	
Amballa Division ...	...	...	161	90	...	...	1,852	...	...	2,108	
Delhi Division ...	...	...	...	554	365	...	794	918	...	2,631	
Total 1899-1900 to 1901-02.	16,013	3,000	1,457	1,143	3,720	153	31,265	1,553	1,039	59,343	
* Total 1896-97 to 1898-99.	17,368	..	2,821	216	341	579	44,084	2,238	1,691	69,338	

* Excluding the figures for the Divisions transferred to the North-West Frontier Province.

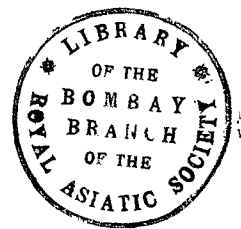
PROGRESS REPORT

ON "THE

ARBORICULTURE IN THE PUNJAB

FOR THE TRIENNIAL PERIOD 1902-1903 TO 1904-1905.

Published by Authority.



Lahore:
THE "CIVIL AND MILITARY GAZETTE" PRESS,
Sole Contractors for Printing to the Punjab Government.

READ—

The Progress Report on Arboriculture in the Punjab for the triennium 1902-03 to 1904-05, submitted with Conservator's letter No. 3046, dated 8th November 1905.

REMARKS.—1. The report, which was due with Government on September 1st, 1905, was received in the Civil Secretariat on the 12th of January 1906. The delay was partly due to the inaccuracy of local officers, and partly occurred in the Conservator's Office.

2. Two hundred and eighty-six miles of avenues were added by District Boards during the period under report. Five hundred and ninety-eight miles were planted, but in 148 miles the arboricultural operations were not successful, the failures being 24 per cent of the length planted, as compared with 67 per cent. in the previous triennium. The districts in which most activity was shewn belong to the arid group, Mianwali and the two Canal Colonies. Fifty-three per cent. of the roads suitable for arboriculture are now stocked with trees. The area under groves managed by local bodies shewed a fall of almost 700 acres. The failures equalled 61 per cent. of the area planted (48 acres). There was an extraordinary fall of 2,331 acres in the plantation returns, but it is explained that out of this area 1,580 acres should not have been recorded as plantations at all. Nurseries and gardens have also diminished; but the gardens at Amritsar and Gujranwala are reported to maintain their popularity.

3. Regarded financially the arboricultural operations of District Boards can hardly be termed successful, as they are conducted at a deficit of about a lakh and a third of rupees. The needs of arboriculture will, however, be considered by Government in distributing the 6½ lakhs grant made by the Government of India to District Boards.

4. The Irrigation Department during the triennium planted over a thousand miles of avenues, more than half the total length suitable for tree-planting having now been stocked. The greater part of the planting operations took place in the arid districts in the west of the province, where the water of the Jhelum and Chenab Canals enabled a high percentage of success to be achieved. Some 2,700 acres of nurseries were started with excellent results, the failures representing only one-fifth of the whole. Arboricultural operations cost the department over three lakhs of rupees, as compared with just under two lakhs in the previous period of report.

5. The Buildings and Roads Branch of the Public Works Department, on the other hand, make tree-planting profitable, realizing Rs. 16,404 net revenue from their operations. About two-thirds of the total length of the roads considered suitable are now planted with trees, and the percentage of failures is commendably low.

6. The Lieutenant-Governor observes with pleasure that on the whole more care than previously has been devoted during this triennium to this important subject, and trusts that it will continue to engage the attention of all officers concerned. He hopes that district officers will keep in view the two chief means to successful tree culture, namely, (1) the enlistment by their own interest in the matter of the active help of the villagers, and (2) the employment of a properly trained expert as district forester whose time will not be taken up chiefly in the auctioning of dead trees but in the care of living ones.

ORDER.—Ordered, that the above remarks be printed and circulated with the report as usual; also that they be published in the *Punjab Government Gazette* and forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, and the Conservator of Forests, Punjab.

By order of the Hon'ble the Lieutenant-Governor of the Punjab,

E. D. MACLAGAN,

Offg. Chief Secretary to Government, Punjab.

No. 3046.
FOREST DEPARTMENT, PUNJAB.

FROM

E. G. CHESTER, Esquire,
Conservator of Forests, Punjab,

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF THE PUNJAB.

Dated LAHORE, the 8th November 1905.

SIR,

I have the honour to submit the Progress Report on Arboriculture in the Punjab for the period 1902-03 to 1904-05. The arrangement of the subjects is the same as in the previous report.

2. This report was due to Government on the 1st September but has been delayed on account of the late receipt of reports from some of the officers concerned and numerous errors and discrepancies in some of the reports which entailed correspondence.

I have the honour to be,

SIR,

Your most obedient servant,

E. G. CHESTER,
Conservator of Forests, Punjab.

PROGRESS REPORT

ON THE

ARBORICULTURE IN THE PUNJAB

FOR THE TRIENNIAL PERIOD 1902-1903 TO 1904-1905.

A.—District Arboriculture. District Boards and Municipalities.

(a).—GENERAL.

1. At the commencement of the period 1902-03 to 1904-05 the length of avenues under the District Boards in the Punjab was 7,229·58 miles, and at its close 7,516·24 miles, showing a net increase of 286·66 miles. The progress and changes in each district are given in the appended Statement IV (a). The total additions, as given at the foot of that statement, include :—

	<i>Miles.</i>
Correction of previous figures	36·77
Planted during the period	598·63
Transfers from the Public Works Department	23·93
	659·33
Add <i>inter</i> -district transfers	300·12
	Total as per statement 959·45

This length of 598·63 miles planted compares with a length of 581·52 miles planted during the previous period. The total deductions as shown in the statement are due to :—

	<i>Miles.</i>
Correction of figures	11·24
Failures	148·93
Avenues felled	136·62
Transfers to Public Works Department	54·07
Other causes	21·81
	372·67
Add <i>inter</i> -district transfers	300·12
	Total 672·79

The above figure of 148·93 miles of "failures" compares favourably with the 390·02 miles, similarly returned as failures in the previous period.

It will be observed that the length of avenues planted during the period amounted to 598·63 and the failures (as at present returned) to 148·93 miles, or considerably less than the length planted. Reference to details, however, shows that in some districts the failures exceeded the length planted during the period, and cases might occur in which no addition was made by planting, and yet there were failures in the young growth of the previous period's planting. Although, therefore, the percentage of failures on the length or area planted cannot always be expressed for each district, they can usually for a group of districts, and during the period under report, for the District Boards, the failures were 24·88 per cent. of the length planted as compared with 67·06 per cent. of the previous period.

The districts which most largely contributed to the additions to avenues by planting were Mianwali, Jhang (that portion which forms the Chenab Colony and has since been transferred to the Lyallpur District) Shahpur, Ferozepore, Rawalpindi, Gujrat and Kangra.

For the purposes of the arboricultural returns the districts are classed in groups as below, and the first three districts above-named belong to the arid group, Ferozepore to the very dry group, Rawalpindi to the dry, and the last two to the fairly moist, so Mianwali (if its figures are correct) can be congratulated on its success, and also Jhang and Shahpur, which, however, have the advantage of canals.

At the close of the period under report there were 7,516·24 miles of avenues out of a total length of 13,964·60 miles of roads reported as suitable for planting.

An examination on the above lines of the figures of the different groups of districts shows the following results :—

Arid districts.—256·17 miles planted during the period and 38·85 miles failed, the failures amounting to 15·16 per cent. of the length planted; and, out of a total length of 4,650·52 miles of roads reported as suitable, 1,585·14 miles were under avenues at the close of the period, 3,065·38 miles remaining to be planted.

The *very dry districts* show planted during the period 65·72 miles and failures 9 miles or 13·69 per cent., and the length of avenues at the close of the period was 1,208·09 miles out of 2,028·44 miles of roads reported as suitable.

In the *dry districts* additions planted were 87·03 miles, and the failures amounted to 19·37 miles or 22·25 per cent.; and, out of 3,902·35 miles of roads reported as suitable, 813·69 miles still require avenues.

The *fairly moist* or "*forest*" districts show additions planted 189·71 miles and failures 81·71 miles or 43·07 per cent.; and, out of a total length of 3,383·29 miles of roads reported as suitable, there were 2,634·35 miles under avenues and 748·94 miles as yet unplanted.

2. At the commencement of the period the area under groves was 5,510·70 acres, at its close 4,835·57 acres, showing a net decrease of 675·13 acres. The progress and changes in each district are given in appended Statement III (a).

The total additions as given at the foot of that statement include:—

	Acres.
Correction of previous figures	24·97
Planted during the period	48·17
Transfers from other heads	10·96
Transfers from other management	8·00
	92·10
Add <i>inter-district</i> transfers	85·96
Total as per statement	178·06

The total deductions as shown in the statement are due to:—

	Acres.
Correction of figures	668·38
Failures	29·41
Transfers to other heads	4·08
Transfers to other management	14·15
Other causes	51·21
	767·23
Add <i>inter-district</i> transfers	85·96
Total	853·19

For the deduction by "correction of figures" the Mianwali District is mainly responsible, in which district, through an error, credit for planting 636 acres more than that actually planted was taken in the previous period.

The above figures of 29·41 acres of "failures" compare favourably with 390·53 similarly returned as failures in the previous period. The 14·15 acres written-off include 6·15 transferred to the Public Works Department, and 8·00 acres made over to private persons. The reasons for writing-off the 51·21 acres are given in the margin of the statement.

An examination of the figures of failures in the method adopted for avenues shows that, as compared with 48·17 acres planted during the period, 29·41 acres or 61 per cent. failed, while, during the previous period, against a total area of 1,100·31 acres planted 390·53 acres or 35·49 per cent. failed.

The percentage of failures in the different groups of districts during the period under report was:—

	Per cent.
Arid districts... ..	2·32
The very dry districts	75·54
Dry districts	81·58
The fairly moist or forest district	18·34

but, except in the arid districts, the area of groves planted during the period was very small.

3. The period opened with an area of 4,327·80 acres under plantations and closed with an area of 1,996·69, the net decrease being thus 2,331·11 acres. The details are shown in Statement II (a).

The additions shown in that statement include:—

	Acres.
Correction of area	2·69
Sown or planted	15·25
Transfers from nurseries, groves, &c.	4·57
Total	22·51

The deductions were:—

Correction of areas	1,580·00
Failures	9·29
Transfers to the Civil Department	734·29
Other causes	30·04
Total	2,353·62

The 1,580 acres written-off belong to the Mianwali District in which, as surmised in paragraph 3 of Mr. Beadon-Bryant's report for the previous period, the area credited during that period had been miscalculated. The transfers to the Civil Department include 244·29 acres of the Sajhowal Forest in the Jhang District, since gazetted as a proposed Reserved Forest, and 490 acres of the Tilauri Plantation in the Delhi District. Adopting the system of criticism employed for avenues and groves the return shows a failure of 9·29 acres against 15·25 acres planted or at the rate of 61 per cent. These results compare with a failure of 19·53 per cent. during the previous period when 394·16 acres failed out of 2,017·34 acres reported as planted. As already stated this figure of 2,017·34 was erroneous in consequence of a mistake in the Mianwali District. The corrected figures show for the previous period failures of 394 acres against 437 planted or 90 per cent.

4. At the commencement of the period there were 400·82 acres under nurseries and at its close 262·17 acres (Statement I (a)). Nurseries and gardens. The total additions during the period were 30·90 acres and deductions 169·55 acres. The area of new nurseries established was 25·45 acres as compared with 41·48 acres opened during the previous period. Of the deductions 141·06 acres were due to corrections, and 4·12 to failures as compared with 27·23 acres of failure during the previous period. The chief item of reduction by correction is one of 124·87 acres in the Gujranwala District where part of the area set apart for nurseries was held and cultivated by zamindars, in return for their services on nursery work and had been wrongly entered as being under nurseries. This mistake has now been rectified.

A new garden of 4·15 acres at Shahr Sultan in the Muzaffargarh District was opened on 1st January 1903 and named Darbar Bagh in commemoration of the Coronation Darbar of that date. A small garden was also laid out at Campbellpur in the newly constituted Attock District.

The Rambagh Garden at Amritsar is in a flourishing condition; its income during the period was Rs. 11,860 as compared with Rs. 9,068 during the previous period. The Malta orange plants for which gardens at Gujranwala are famous showed sign of deterioration and in order to improve the stock about 100 plants were obtained from Naples.

From the Hoshiarpur District it is reported that there is an increased interest in gardening on the part of private persons and several plantations have been formed for profit. Sissoo trees also had been planted extensively by private agency in the Chos for protective purposes.

(b).—DETAILS OF WORK DONE.

ARID DISTRICTS.

5. *Muzaffargarh*.—The length of avenues was increased by 6·18 miles while some 5,000 trees were planted in gaps. The unusually severe cold in January—March 1905 seriously injured many of the young trees and efforts are being made to replace these. All the old nurseries were abandoned being too far from the scene of plantings and arrangements were made with private persons for the temporary use of small plots of land near wells for the raising of shisham and other seedlings for extending the avenues, and the plants thus raised were found sufficient. A garden of 4·15 acres at the back of Shahr Sultan Police bungalow, taken over by the District Board, was laid out and opened on 1st January 1903 and named Darbar Bagh in commemoration of the Coronation Darbar of that date. A Working Plan for three years 1904-05 to 1906-07 has been drawn up and approved by the Commissioner.

Multan.—A length of 10·10 miles of avenues was planted but 11·38 miles are written-off as failures. Arboricultural operations during the period were not a success, failure being ascribed principally to severe frost, which seriously damaged the plants and killed many mango and kikar trees. The Commissioner in forwarding the report remarks that the district is an unpromising one for arboriculture operations though with a good deal of irrigation available it should not be difficult to grow trees. In order to protect the trees from destruction by camels it is proposed to frame a bye-law to the effect that camels using the roads on which arboriculture operations are in progress, or on which trees are growing, should be muzzled. In the opinion of the compiler of this report this proposal is an excellent one, and if a similar measure could be applied to goats using roads recently planted the result would doubtless be good. In the Himalayas beyond Darjeeling sheep are muzzled by their owners when driven over certain hills to prevent their feeding on aconite plants.

Dera Ghazi Khan.—No progress was made. As remarked in the previous report the rise of water in the subsoil of land near the river bank makes it impossible to raise trees there, while want of water prevents the planting of avenues along roads.

Mianwali.—This district was constituted in November 1901. Heavy expenditure was at first incurred in importing young trees for the District Board garden and the new roads, and, to reduce this, a nursery of $2\frac{1}{2}$ acres was made in the garden. The report says that the length of avenue planted amounted to 36 miles, but adds that this figure represents original planting and the filling up of old gaps with young trees. The 36 miles are shown in the statement as additions to the length of avenue, and no credit should here be taken for the filling in of gaps. The length reported should represent extensions only. Unfortunately the excessive cold of the early months of 1905 killed the trees along 10 miles. The net result, however, appears to be decidedly satisfactory. The Deputy Commissioner reports that zamindars in two of the tahsils have been induced, in return for small monthly payments, to tend and water the roadside trees.

The area under plantation as given in the previous return was entirely wrong, as was noticed in paragraph 3 of the last triennial report and the correction of the figures accounts for the decrease of 1,580 acres.

Under groves also there is a decrease of 636 acres due to correction of the previous return, while 20·57 acres are shown as addition and represent the new garden at Mianwali and the trees planted round the newly built houses of officers. The Dilkusha garden at Bhukkar has been much improved and it is hoped will in a few years yield the District Board a fair income.

Montgomery.—No work was done during the period. The Deputy Commissioner reports that nearly all the roads are treeless and it is impossible owing to the scarcity of water to lay out avenues.

Jhang.—The period opened with a balance of 115 miles of avenues, 166·00 miles of avenues were planted in the Chenab Colony and 229·25 miles were transferred to the Lyallpur District constituted in December 1904. No new groves were planted up but several fruit trees were planted in the District Board garden at Sadar in 1904. The large plantation, area 244·29 acres, at Sahjowal was notified as a proposed Reserved Forest and transferred to the Civil Department. There are now no permanent nurseries under the District Board, areas in different localities are utilised temporarily as required for the purpose of raising trees.

Lyallpur.—This district was constituted on December 1st, 1904. It has received 229 miles of avenues from the Jhang District, and arboriculture operations on a large scale are being started. This is the only district in the Punjab in which a Dehra Dun trained Forest Ranger is in charge of the arboriculture operations.

Shahpur.—During the period 33·89 miles of avenues were planted and 17·47 miles failed, while the trees on 40 miles were felled having dried and been blown down by storm after the severe frost of 1905. Under groves 13 acres were added by plantations but 20·35 acres failed. An addition of 2 acres was made to nurseries.

Hissar.—The length of avenues was increased by 4 miles, and 3 new nurseries, measuring 5·49 acres, were established. The Parker garden, area 15·22 acres, was cut down and leased for cultivation. The Lal garden, area 3 acres, and an old District Board nursery at Hissar, 2·90 acres, were also cut down. A plan of operations for 5 years 1905 to 1909 has been drawn up and approved by the Commissioner, and if it can be carried out the report for the current three years' period should show considerable progress. As observed in the previous report arboriculture in this district is worked under great difficulties owing to very scanty rainfall and the necessity of always supplying artificial irrigation to any trees planted. However, arrangements for the supply of water have been made with the Canal Department and a fair start has been made. The tendency to sell their trees among the villagers is in no way decreasing and the Deputy Commissioner remarks that this, though regrettable, is only natural considering the large demand for fuel created by the new cotton factories.

VERY DRY DISTRICTS.

Ferozepore.—Trenches were dug along the sides of 22 miles of road and seeds were sown. Of this length 7 miles failed. Extension of the Kairuwala Plantation was successful to the extent of 6 acres, and farash and kikar were planted in the Dagroo camping ground. The recent frost has caused immeasurable damage, nearly all the young trees having dried up to the roots, but a large number have sprouted from the collar.

Rohtak.—During the period 8 miles of avenues were planted, while 2 miles failed. The total number of trees planted on the roadsides was 5,180, of which 2,393 or 44 per cent. died. There are 5 nurseries in the district, *viz.*, one at the head-quarters of each tahsil and one at Hassangarh established in connection with the arboriculture scheme. The nurseries at Rohtak and Sampla are irrigated by canal water and the rest by wells. The one at Sampla has not flourished owing to defective arrangements for the supply of water, but steps have been taken to rectify the defect. The plants raised

in the nurseries are nim, jaman, shisham and pipal. Here as everywhere else reference is made to the damage done by the frost of January—February 1905.

Lahore.—Trees were planted on 19·50 miles of roads at a cost of four annas and eleven pies per tree and nurseries were established at Dialpur, Budha Jaslani and Momanpur. The staff has been re-arranged, instead of one Darogha and one Naib Darogha, one Overseer has been appointed in each tahsil. It is too early to say whether this new arrangement will produce the improvement in working which is expected. This is one of the districts in which the arboricultural operations yield a surplus of income over expenditure, and it can therefore afford more extensive operations.

Karnal.—During the period 14 miles of new avenues were planted and in addition 6,400 trees were planted out to fill up gaps in old avenues, the young trees being protected by thorn fencing and mud walls erected round them. No new nursery was established, but an extension of one acre was made to the nursery at Karnal. The scheme of arboriculture operations drawn up for 5 years in 1901 was carried into execution as far as circumstances allowed. Another for the years 1905—1910 has been drawn up and approved by the Commissioner. The darogha sent in 1904 to the Dehra Dun Forest School for training in arboriculture had to proceed on sick leave and another, a better man, will be sent to the school for training this year.

DRY DISTRICTS.

Jhelam.—The work done consisted of an addition of 0·54 acres to nurseries and planting up avenues 15·18 miles in length, the failure being 3·96 miles. The number of trees planted amounted to 4,567, of which 1,114 died, as compared with 8,706 trees planted and 2,535 deaths during the previous triennial period.

Gujranwala.—At the close of the previous triennial period 126·12 acres were shown under nurseries. This figure, however, included an area of 124·87 acres which originally formed part of the land set apart for nurseries in the Khangah Dogran Tahsil in connection with the Chenab colonization scheme and was held by malis rent free who used it for private cultivation instead of receiving a monthly salary for looking after the nurseries. The area is now leased to cultivators who pay a fair rent to the District Board and look to the upkeep of the nurseries as well. As the area was not stocked with trees for transplantation purposes it has been deducted from the area under nurseries. Arrangements for the extension of nurseries have been made in the Khangah Dogran Tahsil, while in the remaining tahsils nurseries are urgently needed and are being arranged for at places near the operations in progress.

Avenues to a length of 17·50 miles were planted up and gaps in old avenues were also filled up, the trees being chiefly kikar, shisham, siris and mulberry. No fruit trees were planted on roads except a few mango trees in front of the Police Office. The total length of avenues at the close of the period was 204·26 miles. The plantations were raised from 45 to 46 acres during the term and a sum of Rs. 1,445 was paid to the Irrigation Department for water for these plantations and certain nurseries.

The report contains a good deal of information about gardens. The few palm trees of Egyptian origin that still remain are in good condition, but have produced no fruit of any value. Several fruit trees are cultivated in the larger gardens which are noted for their Malta orange plants. About 100 plants of the best variety of the Malta orange were lately obtained from Naples to improve the existing stock which in some cases showed sign of deterioration. A large number of lemons, khatta, and pommelo were planted out at the Sadr garden but most of them died as also the new orange grafts, the cause being the severe cold of 1904-05. There is a great demand for Malta orange plants.

Gurgaon.—There was no extension of avenues. The excessive cold of 1904-05 seriously damaged the roadside trees, most of which are reviving but some have perished. The damage extended chiefly to nim and mango trees and to some extent to kikar and in rare cases to sissoo trees. Almost all young nim and mango trees were destroyed. The agreement regarding the Sohna hill plantation was renewed in 1903 for a period of 5 years. Mango and nim seedlings were raised in the nurseries and transplanted to fill the gaps along the roads and bunds. A three years' scheme for arboricultural operations has been drawn up and sanctioned by the Commissioner.

Amritsar.—An attempt was made to extend the avenues by 7 miles, but the failures amounted to 5 miles, leaving 2 miles as the net addition as compared with 32 in the previous period. The trees on 13·20 miles of avenue were felled and sold. The report says that these trees were dead, but does not give the cause of death. The area under nurseries decreased by 0·74 acres.

In the Rambagh garden, which continues to maintain its reputation with the general public, 3,900 plants of fruit trees, such as mango, peach, nectarine, plum, loquats, orange and Malta orange, were planted, while about 2,000 plants

of mangoes, loquats, Malta oranges and plum were sold. The income derived from this garden is steadily on the increase, being Rs. 11,860 during the period under report as compared with Rs. 9,668 during the preceding period.

During the period 3,340 heads of cattle were impounded under the Cattle Trespass Act for injuring young plants on the roadsides and this damage by cattle passing along the road is reported to be one of the chief causes of failures in avenues.

Delhi.—The avenues were extended by 4.75 miles, but of this length 2.70 were failures. A length of 2.10 miles was felled. The closing length was thus practically the same as the length at the commencement of the period. A number of gaps in the old avenue were filled in. The heavy frost of 1904-05 did considerable damage in the nurseries which had to be re-stocked before the close of the year.

The Tilauri Plantation, area 490 acres, was transferred to the Civil Department and the area of groves was reduced by 0.23 acres owing chiefly to pomegranate and nim trees in the garden at Ballabgarh having died from frost. A Working Plan has been drawn up and the District Board has appointed an arboriculture darogha and it is hoped that under his supervision results will improve.

Jullundur.—No extensions of avenues, plantations or groves were carried out during the period under report, the expenditure being restricted to that of maintenance. The income from all sources being Rs. 30,127 and the expenditure Rs. 17,486 there was a net income of Rs. 12,000 odd and it is to be regretted that there should have been no extensions of avenues. Since 1904-05 a new system for the care of the avenues has been introduced, and the roads apportioned to various members of the District Board.

During the period 5,735 cattle were impounded against 3,840 during the preceding period and a number of persons were also prosecuted for mischief in connection with arboriculture operations.

Ludhiana.—The planting of avenues was carried out over a length of 10 miles, but in February 1905 the severe frost killed the young plants along 7 miles and not only did young trees suffer but mature trees of mango, nim and jaman were damaged, and the fruit crop was destroyed. The experiment of planting fruit trees in blocks as a remunerative measure was made and 3 acres were planted with imported mangoes, peaches and plums, but the whole plantation was destroyed by the cold in February 1905. The services of the Forester in charge Ludhiana Tahsil were dispensed with and the arboriculture works entrusted to the overseer assisted by two mates and one mali.

Rawalpindi.—In this district the avenues were extended by 24 miles, but on 28 miles the trees are reported to have dried and were consequently cut and sold, and 17 miles were transferred to the Attock District, the closing balance was thus considerably less than the opening. The 28 miles felled will be re-stocked. The Commissioner in forwarding the report expresses his opinion that, inasmuch as the arboricultural operations as a whole show a surplus of income over expenditure, it is to be regretted that more planting was not done. The area under groves was similarly reduced by a transfer of 55.79 acres to the Attock District.

Attock.—This district was constituted on 1st April 1904 and the principal work done during the year was the planting up of 5.33 miles avenues and a garden at Campbellpur. Mainly as a consequence of transfers from the Jhelam and Rawalpindi Districts the Attock District had at the close of the period a total length of 97.85 miles under avenues. The Commissioner remarks that it is not a favourable district for arboriculture operations which will have to be confined mainly to raising plants in nurseries at head-quarters of tahsils and planting the roads radiating from them where supervision is easiest and where water is procurable.

FAIRLY MOIST DISTRICTS.

Gujrat.—54.19 miles of avenues were planted up, but 19.81 miles failed chiefly owing to want of rain and the frosts. The tree selected for planting was shisham. Considering the drought and frost these results are fairly satisfactory, but in view of the large surplus made, the gross income being Rs. 36,735 as compared with an expenditure of only Rs. 17,433, it is perhaps regrettable that more was not attempted. When the Upper Jhelam Canal opens the operations will be greatly simplified. The area under nurseries was increased by 2.13 acres. All the three men in charge of the arboriculture operations have been trained at the Imperial Forest School, Dehra Dun, and a Working Plan for 5 years has been drawn up.

Gurdaspur.—No progress except planting up of 2.50 miles of avenues has been reported from this district although there is over a 100 miles of roadsides to be stocked with trees and the arboricultural returns as a whole show a surplus of revenue over expenditure.

Ambala.—Three new nurseries were established and 2.16 miles of avenues planted up. A plan of operations for 5 years 1902-03 to 1906-07 was prepared and sanctioned by the Commissioner and its provisions have so far been adhered to. Arboriculture control books are maintained in each tahsil. The Commissioner in transmitting the report calls attention to the progressive falling-off in income and considers that this district should show a surplus over expenditure.

Sialkot.—A length of 40·75 miles of roads was planted up, while failures occurred in 19·50 miles and floods and storms destroyed 48·75 miles. A considerable amount of work was also done in planting second or inner lines of trees along some of the main wider roads. This planting is not included in the above figures of extension. As far as practicable shisham was planted and where the ground was not suited to trees of that species, kikar, mango or jaman were planted. An addition of 9·60 acres of groves was planted. Considerable damage was done to green trees by storms and floods and the last winter's frost killed a large number of trees on roadsides. It is again reported that goatherds do much damage to trees by lopping off the young branches to feed their flocks and several persons were seized and prosecuted, but the evil is not removed.

More supervision in planting, rearing and sales of trees is considered necessary by the Deputy Commissioner, and it is proposed to re-appoint three superintendents of arboricultural operations. Some method of preventing the lopping of trees by goatherds is evidently most desirable, success cannot be expected till protection is assured. The arboricultural returns as a whole show a considerable excess of revenue over expenditure and, if necessary, the District Board should be able to afford extra establishment to improve the protection.

Hoshiarpur.—During the period under report avenues on roadsides were extended over 7 miles and the gaps caused by the falling of trees were filled up. Two new daroghas who had received training at the Imperial Forest School were appointed, and it is hoped they will effect a considerable improvement in the operations.

In order to prevent damage by cattle cactus fences are planted round young trees. The length of road planted now nearly reaches the length selected as suitable for planting, but possibly additional roads will be opened up. The surplus of gross revenue over expenditure is considerable and the district can therefore afford to continue extensions of avenues.

Simla.—The chief work done was the raising in nurseries of fruit trees, most of which are sent out to various districts in the Punjab.

Kangra.—During the period under notice no less than 81·23 miles of avenues on roadsides were planted, of which 39·30 miles failed. The programme for the years 1901-02 to 1903-04 was completed and a programme for 1904-05 to 1906-07 was prepared and sanctioned by the Commissioner and its provisions adhered to. Fruit trees were received from the Anandale garden, Simla.

Under the head of Fruit Culture the District Officer reports: Cherry did not prove successful, apples seemed to be successful, but the fruit did not ripen; peaches and plums were the most successful.

The apricot did not take so well at Dharmsala as at Kulu, where both Europeans and natives grow fruit for sale. The almond was tried for the first time; the trees are doing well at Dharmsala.

(c). FINANCIAL RESULTS.

6. The appended Statement V (a) shows that the revenue from arboriculture during the triennial period amounted to Rs. 5,84,144, or Rs. 62,524 more than in the previous period, and the expenditure as per Statement VI (a) to Rs. 7,23,065, or Rs. 40,268 more than in the preceding period, there was thus for the period under review a deficit of Rs. 1,38,921 as compared with a deficit of Rs. 1,61,177 for the previous period. The highest incomes, *i. e.*, incomes exceeding Rs. 30,000 were realized in the Sialkot, Lahore, Gujrat, Gurdaspur, Jalandhur, Shahpur, Hoshiarpur, Ferozepore and Ludhiana districts, and the Delhi, Amritsar and Lahore municipalities. The highest expenditures, *i. e.*, those over Rs. 30,000 were incurred in the Gujranwala, Multan, Jhang and Sialkot districts and the Lahore, Delhi and Amritsar municipalities.

Omitting municipalities there are 29 District Boards, of which 11 (Shahpur, Ferozepur, Lahore, Gurgaon, Jalandhur, Rawalpindi, Gujrat, Gurdaspur, Sialkot, Hoshiarpur and Simla) worked at a profit, the remaining 18 working at a deficit.

B.—Canal Arboriculture.

7. At the commencement of the period the length of avenues under the Irrigation Department was 4,105·59 miles out of a total length suitable for the purpose of 8,486 miles, and at its close 4,490·77 miles showing a net increase of 385·18 miles. The total additions as given in the appended Statement IV (b) were :—

	Miles.
Correction of figures	21·40
Planted during the period	1,007·15
Total	1,028·55
Add <i>inter</i> -divisional transfers	179·03
Total as per statement	1,207·58

This length of 1,007·15 miles planted compares with a length of 1,221·47 miles planted during the previous period. The divisions returning the best records of planting work are the Upper Gugera with a net length of 103 miles, the Jhang Division with 74 and the 2nd Division Jhelam Canal with 176 miles.

Similarly the deductions, as shown in the statement, are due to :—

							Miles.
Correction of figures	...	..	...	...	...	...	229·15
Failures	...	...	...	...	...	...	358·64
Length felled	...	...	...	...	...	...	50·48
Other causes	..	...	...	...	...	...	5·10
Total							643·37
Add <i>inter</i> -divisional transfers	...	...	...	...	...	...	179·03
Total							822·40

The above figures of 358·64 miles of "failure" compare favourably with the 539·55 miles similarly returned for the previous period. The percentage of failures on the total length of avenues planted during the period was 35·60 while during the previous period it was 44·17.

8. There are no groves in the charge of the Irrigation Department.

9. The period opened with an area of 20,075·75 acres under plantation and closed with an area of 22,722·97 acres, the net increase being thus 2,647·22 acres. The details are shown in the Statement II (b), the additions as shown in that statement including :—

							Acres.
Correction of areas	...	...	...	...	...	...	1,092·53
Sown or planted	...	...	...	...	...	...	2,707·61
Transfers from nurseries	...	...	...	...	...	...	73·64
Other causes	...	...	...	...	...	...	16·74
Total							3,890·52
Add <i>inter</i> -divisional transfers	...	...	...	...	...	...	837·89
Total							4,728·41

The above figures of 2,707·61 acres planted compare with 2,451·93 acres planted during the previous period.

The exclusions comprise :—

							Acres.
Correction of areas	...	...	...	...	...	...	92·41
Failures	...	...	...	...	...	...	548·25
Other causes	...	...	...	...	...	...	602·64
Total							1,242·30
Add <i>inter</i> -divisional transfers	...	...	...	...	...	...	837·89
Total							2,081·19

In most instances the reasons for the failures and for the loss from other causes are mentioned in the margin of the statement. The 548·25 acres of failures compare favourably with the 1,221·24 acres of the previous period, the percentage of failures on the area planted falling from 49·80 in 1899·00 to 1901·02 to 20·25 in 1902·03 to 1904·05.

10. The area under nurseries amounted at the commencement of the period to 75·84 acres and at its close to 36·53 acres, showing a decrease of 39·31 acres due mainly to the transfer of 73·64 acres of nurseries to plantations. New nurseries covering an area of 61·83 acres were established as will be seen from the appended Statement I (b).

11. The revenue during the period amounted to Rs. 3,16,901 and the expenditure to Rs. 6,25,816, thus showing a deficit of Rs. 3,08,915, as compared with a revenue of Rs. 2,21,713, expenditure of Rs. 4,21,540 and a deficit of Rs. 1,99,827 during the previous triennial period. Incomes exceeding Rs. 20,000 each were received in the 1st and 2nd Divisions of the Bari Doab Canal, the Delhi and Hissar Divisions of the Western Jumna Canal and the Ludhiana Division of the Sirhind Canal. The 1st Division of the Bari Doab headed the list with a revenue of Rs. 44,810. Expenditure exceeding Rs. 30,000 each were incurred in the 1st Division, Bari Doab Canal, the Upper Sutlej Division and in the Lyallpur, Lower Gugera, Upper Gugera and Jhang Divisions of the Chenab Canal, also in the 2nd Division, Jhelum Canal. The last named division heads the list with an expenditure of Rs. 63,001.

C.—Arboriculture in Provincial Divisions (Public Works Department).

12. At the commencement of the period the length of avenues on the roads was 875·50 miles (out of 1,586 miles considered suitable for avenues) and at its close the length was 904·23, showing a net increase of 28·73 miles. The progress and changes in each Provincial Division are given in the appended Statement IV (c), the total additions as given at the foot of that statement including:—

	Miles.
Correction of figures	4·16
Planted during the period	72·84
Transfers from other Departments	22·53
	99·53
Add <i>inter</i> -divisional transfers	162·76
Total as per statement	262·29

The length of 72·84 miles planted compares with a length of 60·54 miles planted during the previous period.

The total deductions as shown in the statement were:—

	Miles.
Correction of figures	20·16
Failures	12·50
Felled	22·49
Transfers to other Departments... ..	15·65
	70·80
Add <i>inter</i> -divisional transfers	162·76
	233·56

The above figures of 12·50 miles of failures compare favourably with 44·42 miles during the previous period. The percentage of failures was 17·16 against 73·37 during the previous period.

13. The period opened with 974·06 acres under groves and closed with 502·22 acres, there being a net decrease of 471·84 acres as will be seen from Statement III (c). The decrease is due principally to corrections of area in the Ferozepore Division, regarding groves entered in the return as transferred to it with the Ludhiana-Ferozepore road from the Lahore Division.

14. The appended Statement II (c) shows that during the period little progress was made under the head Plantations, the area at the commencement of the period being 83·33 acres and that at its close 85·99 acres.

15. Under nurseries there were 10·03 acres at the commencement of the period and at its close 42·60 acres or a net increase of 32·57 acres due to new nurseries being established in the Rawalpindi, Shahpur and Ambala Divisions, as will be seen from the appended Statement I (c).

16. The revenue of the period amounted to Rs. 68,947 and the expenditure to Rs. 52,543, thus showing a surplus of Rs. 16,404. The Rawalpindi, Jullundur, Gujranwala, Ambala, Delhi and Ferozepore Divisions worked at a profit, whilst Lahore, Lyallpur, Shahpur and Dera Ghazi Khan Divisions worked at a deficit.

The appended Statements V (c) and VI (c) show the income realized and the expenditure incurred in each division.

It must here be noted that the above figures exclude those of the Kangra Provincial Division, the figures for which are reported to be not available at present.

General Remarks.

17. The hard frost of the last winter affected the arboriculture operations throughout the Punjab, seriously damaging the young trees. The majority of these are recovering, but a large proportion succumbed. Nim, mango and jaman appear to have suffered most, and after them kikar, shisham least of any.

Considering, as a whole, the results of the operations under the three managements of the District Boards, the Irrigation Department and the Provincial Divisions, the following table exhibits the extensions by planting

and the failures in avenues, groves and plantations, respectively, during the period under report, and compares them with those of the previous period :—

	1902-03 to 1904-05.		1899-00 to 1901-02.	
	Planted.	Failed.	Planted.	Failed.
Avenues (miles)	1,678·62	520·07	1,863·53	973·99
Groves (acres)	48·32	30·81	1,100·31	390·53
Plantations „	2,723·42	558·98	4,468·98	1,615·40

The additions by planting compare unfavourably with those of the previous period, but the difference is more apparent than real, the return for the period under report showing corrections of previous figures which reduce them by 198 miles under avenues, 577 acres under plantations, and 1,100 acres under groves; mistakes in the figures of additions by planting for the previous period being probably the principal cause for these corrections.

The ratio of failures to extensions during the period under report works out as follows :—

Avenues.—30·98 per cent. as compared with 52·26 per cent. for the previous period.

Groves.—63·75 per cent. as compared with 35·50 per cent. for the previous period.

Plantations.—20·53 per cent. as compared with 35·92 per cent. for the previous period.

In the review of the Local Government on the report for the previous period all officers concerned were exhorted to exercise greater care in the work of transplanting and also of protection. The above calculation shows (except in the case of groves) a decided improvement in planting, and this is all the more gratifying when allowance is made for the unusually severe winter of 1904-05 which damaged established trees as well as seedlings.

The improvement in protection is not so easily estimated. The damage to roadside trees by the lopping of the branches by goatherds and by the browsing of camels still continues, and is mentioned in several of the reports, more especially in that from Multan, where the damage done by camels to roadside trees is so great that the Deputy Commissioner suggests the framing of a bye-law requiring the muzzling of these animals passing along roads.

19. The revenue realized from all sources was Rs. 9,69,992 and the expenditure Rs. 14,01,424, showing a deficit of Rs. 4,31,432 for the three years' period under report, or an average of Rs. 1,43,811 per year, while during the previous period the revenue was 8,27,576, expenditure Rs. 11,63,680, and the deficit Rs. 3,36,104, thus the revenue of the period was better by Rs. 1,42,416 and the expenditure and deficit Rs. 2,37,744 and Rs. 95,328 respectively, more than in the previous period.

This deficit of Rs. 4,31,432 is composed of :—

	Rs.
District Boards, deficit	1,38,921
Irrigation Department, „	3,08,915
Provincial Division, surplus	16,404

20 In connection with the watering of trees the Deputy Commissioner. Mianwali reports :—

“Four aëromotors have been erected at head-quarters, and of these that with the lightest draught is on the whole the most satisfactory, but even this motor is of a very much heavier pattern than is recommended by the manufacturers for a place in which the water is 55 feet from the surface. It consequently does not work unless at least a six-mile wind is blowing, the other motors requiring at least a ten-mile wind. The discharge of water from a machine with a heavy wheel and a large pipe is naturally better than that from a machine with a smaller wheel and a smaller pipe, but the corresponding decrease in working hours more than counter-balances this advantage. I understand from the Overseer, lately in charge of the Anderson Water-works, that in Ambala, where the water is only about 22 feet from the surface, an aëromotor with a 12 feet wheel worked in a wind of 5 miles or more, that is to say, it worked almost continuously and it would be possible to dispense altogether with bullocks on the well on which it was placed, although the actual discharge might not be very great. In Mianwali a ten-mile wind is required to start any of the three motors with 16 feet wheel and even a 12 feet wheel is not started unless the wind blows at the rate of at least 6 miles an hour. Consequently these motors, though a valuable assistance, can never take the place of bullocks, as they may not work for days together, but I see no reason why a motor with an eight feet or even a seven feet wheel and 1 inch pipe, as recommended by the Company for very deep wells, should not give a constant, if small, supply of water.”

STATEMENTS.

STATEMENT No. I (a).

PROGRESS STATEMENT OF NURSERIES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1902-03 TO 1904-05.

1	2	3					4					5	6
DISTRICT.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
		Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	Acres and decimials.	
ARID DISTRICTS.													
Muzaffargarh ...	1'51	...	...	...	...	...	...	...	...	(a) 1'51	1'51	...	(a) Plants used, nursery discontinued.
Multan ...	0'38	...	0'31	...	...	0'31	...	0'32	...	(a) 0'11	0'43	0'26	
Dera Ghazi Khan ...	5'25	...	...	...	...	...	...	...	...	...	...	5'25	
Mianwali ...	4'95	...	2'50	...	...	2'50	...	...	0'68	...	0'68	6'77	
Montgomery ...	...	...	...	...	...	...	...	...	...	...	...	...	
Jhang ...	4'5	...	...	...	...	...	...	...	...	(b) 4'50	4'50	...	(b) Transfer to Lyallpur.
Lyallpur ...	...	...	...	...	(c) 4'50	4'50	...	...	4'50	...	4'50	...	(c) Transfer from Jhang.
Shahpur ...	7'15	...	2'00	...	...	2'00	...	...	...	...	...	9'15	
Hissar ...	124'55	...	5'49	...	...	5'49	...	...	...	(a) 2'90	2'90	127'14	
Total Arid Districts.	148'29	...	10'30	...	4'50	14'80	...	0'32	5'18	9'02	14'52	148'57	
VERY DRY DISTRICTS.													
Ferozepore ...	0'50	...	...	...	...	...	...	...	...	(a) ...	...	0'50	
Rohatak ...	1'94	...	1'55	...	...	1'55	...	...	...	0'88	0'88	2'61	
Lahore ...	10'79	...	1'00	...	...	1'00	...	...	...	...	...	11'79	
Lahore Municipality	0'20	...	...	...	...	...	...	...	...	...	...	0'20	
Karnal ...	2'37	...	1'02	...	...	1'02	...	0'02	...	...	0'02	3'37	
Total Very Dry Districts.	15'80	...	3'57	...	...	3'57	...	0'02	...	0'88	0'90	18'47	
DRY DISTRICTS.													
Jhelum ...	13'40	...	0'54	...	...	0'54	...	...	...	(a) ...	...	13'94	
Gujranwala ...	126'12	...	1'25	...	...	1'25	124'87	0'53	1'00	0'45	126'85	0'52	(d) Area leased for cultivation.
Gurgaon ...	1'45	0'08	...	...	...	0'08	...	0'13	0'84	...	0'97	0'59	
Amritsar ...	24'44	...	...	...	...	...	...	0'24	0'10	0'40	0'74	23'70	
Amritsar Municipality.	7'34	...	...	...	...	...	...	...	...	(a) ...	...	7'34	
Delhi ...	0'75	...	0'10	...	...	0'10	...	...	...	(a) 0'20	0'20	0'65	
Jullundur ...	7'13	...	...	...	...	...	...	...	0'87	...	0'87	6'26	
Ludhiana ...	3'91	...	0'02	...	...	0'02	...	...	0'95	(a) 0'21	1'16	2'77	
Rawalpindi ...	0'07	0'12	...	...	...	0'12	...	...	...	(e) 0'19	0'19	...	(e) Transfer to Attock.
Rawalpindi Municipality.	1'78	...	...	...	...	...	...	...	...	...	...	1'78	
Attock ...	...	...	0'13	...	0'19	0'32	...	...	...	...	...	0'32	(f) Transfer from Rawalpindi.
Attock Municipality	...	0'04	...	...	0'01	0'05	...	...	0'04	...	0'04	0'01	
Total Dry Districts.	186'42	0'24	2'04	...	0'20	2'48	124'87	0'90	3'80	1'45	131'02	57'88	
FAIRLY MOIST OR "FOREST" DISTRICTS.													
Gujrat ...	2'23	...	3'99	(g) 0'51	...	4'50	...	2'37	...	...	2'37	4'36	(g) Transfer from groves.
Gujrat Municipality	...	...	...	...	...	...	...	...	...	...	...	...	
Gurdaspur ...	3'70	...	...	...	...	...	...	...	...	(h) 0'10	0'10	3'60	(h) Said to be transferred to the P. W. D. Provincial but not credited in their returns.
Ambala ...	2'01	...	0'21	...	...	0'21	0'24	0'21	0'80	(i) 0'19	1'44	0'78	
Sialkot ...	10'26	...	3'53	...	...	3'53	2'74	...	2'18	(j) ...	4'92	8'87	(i) Abandoned.
Hoshiarpur ...	10'61	...	0'41	...	...	0'41	7'98	0'16	...	(j) 0'77	8'91	2'11	
Simla ...	8'00	...	0'50	...	...	0'50	5'23	...	...	...	5'23	3'27	(j) Abandoned.
Kangra ...	2'78	...	0'90	...	...	0'90	...	0'14	...	...	0'14	3'54	
Kangra Municipality.	10'72	...	...	...	...	...	...	...	...	...	...	10'72	
Total "Forest" Districts.	50'31	...	9'54	0'51	...	10'05	16'19	2'88	2'98	1'06	23'11	37'25	
Total 1902-03 to 1904-05.	400'82	0'24	25'45	0'51	4'70	30'90	141'06	4'12	11'96	12'41	169'55	262'17	
Total 1899-1900 to 1901-02.	494'41	...	...	...	...	41'59	...	...	...	...	135'18	400'82	

STATEMENT NO. I (b).

PROGRESS STATEMENT OF NURSERIES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1902-03 to 1904-05.

1	2	3					4					5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Bári Doáb Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Bári Doáb Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Bári Doáb Canal, 3rd Division.	2'00	...	4'61	...	...	4'61	...	...	0'47	...	0'47	6'14	
Upper Sutlej Division, Inundation Canal.	0'10	...	18'58	...	...	18'58	...	1'40	9'28	8'00	18'68	...	
Multan Canals Division.	9'01	...	0'48	...	...	0'48	...	...	5'50	...	5'50	3'99	
Dera Ghazi Khan Division, Indus Canals.	3'65	0'20	0'24	...	...	0'44	...	0'08	0'58	...	0'61	3'48	
Muzaffargarh Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Sutlej Inundation Canal Divisions.	...	...	...	...	...	...	...	...	...	...	...	...	
Western Jumna Canal, Karnal Division.	2'38	...	5'42	...	...	5'42	...	...	...	(a) 6'80	6'80	1'00	(a) Used up in filling up gaps caused by failure in plantation and for planting up 3 miles of avenues.
Western Jumna Canal, Delhi Division.	25'35	...	0'03	...	...	0'03	...	1'25	24'13	...	25'38	...	
Western Jumna Canal, Hissar Division.	4'83	...	0'26	...	...	0'26	...	...	...	(b) 2'89	2'89	2'20	(b) Used up in planting avenues.
Sirhind Canal, Ferozepore Division	...	...	...	...	...	...	...	...	...	...	...	...	
Sirhind Canal, Ludhiana Division.	2'31	...	8'00	...	...	8'00	...	...	...	...	...	10'31	
Sirhind Canal, Patiala Division.	2'62	...	...	...	...	...	2'62	...	...	...	2'62	...	
Sirhind Canal, Bhatinda Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Chenab Canal, Khanki Division.	2'38	...	0'30	...	...	0'30	...	...	...	...	...	2'68	
Chenab Canal, Lyallpur Division.	...	...	13'73	...	...	13'73	...	...	12'33	...	12'33	1'40	
Chenab Canal, Lower Gugera Division.	0'73	...	2'10	...	...	2'10	...	...	2'83	...	2'83	...	
Chenab Canal, Upper Gugera Division.	0'40	...	0'29	...	...	0'29	...	...	...	...	...	0'69	
Chenab Canal, Jhang Division.	...	...	1'24	...	...	1'24	...	0'42	0'82	...	1'24	...	
Chenab Canal, Buralla Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Swat River Canal Division.	1'00	...	...	...	...	...	...	...	0'25	...	0'25	0'75	
Jhelum Canal, 1st Division.	0'50	...	...	...	...	...	...	0'50	...	...	0'50	...	Unirrigated.
Jhelum Canal, 2nd Division.	8'50	...	0'30	...	...	0'30	...	...	8'80	...	8'80	...	
Jhelum Canal, 3rd Division.	10'00	...	6'25	...	...	6'25	...	2'99	8'70	0'75	12'44	3'61	
Jhelum Inundation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Total for 1902-03 to 1904-05.	75'84	0'20	61'83	...	...	62'03	2'62	6'64	73'64	18'44	101'34	36'53	
Total 1899-1900 to 1901-02.	52'04	...	...	...	...	206'59	...	...	...	...	182'79	75'84	

STATEMENT No. I (c).

PROGRESS STATEMENT OF NURSERIES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1902-03 TO 1904-05.

1	2	3					4					5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	
Rawalpindi Division.	1'87	...	4'21	...	...	4'21	...	...	2'92	0'05	2'97	3'11	
Simla Division ...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division ...	...	...	...	...	...	...	...	...	...	...	...	...	
Lahore Division ...	5'67	0'92	...	...	...	0'92	...	...	...	(a) 0'94	0'94	5'65	(a) From 0'89 acres, plants used for avenues, acres 0'05 transferred to Ferozepore Provincial Division.
Jullundur Division	0'50	...	1'05	...	...	1'05	...	0'06	0'42	...	0'48	1'07	
Lyallpur Division	...	...	...	...	...	...	...	...	...	...	...	...	
Gujranwala Division.	...	1'14	0'35	...	...	1'49	...	0'10	...	(b) 0'10	0'20	1'29	(b) Transferred to Gujrat District Board with the Kathiala rest-house.
Shahpur Division	...	...	28'05	...	...	28'05	...	...	...	...	...	28'05	
Dera Ghazi Khan Division.	0'14	...	0'63	...	...	0'63	...	...	...	(c) 0'63	0'63	0'14	(c) Abandoned.
Ambala Division ...	0'23	0'54	1'40	...	...	1'94	...	0'01	0'91	...	0'92	1'25	
Delhi Division ...	1'62	...	...	...	...	...	...	...	...	...	...	1'62	
Ferozepore Division	...	...	0'37	...	(d) 0'05	0'42	...	...	...	...	...	0'42	(d) Transfer from Lahore District.
Total 1902-03 to 1904-05.	10'03	2'60	36'06	...	0'05	38'71	...	0'17	4'25	1'72	6'14	42'60	
Total 1899-1900 to 1901-02.	11'08	...	...	...	...	6'34	...	...	...	...	7'39	1'03	

STATEMENT No. II (a).

PROGRESS STATEMENT OF PLANTATIONS IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1902-03 TO 1904-05.

1	2	3	4						5						6
District.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas, as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.
ARID DISTRICTS.															
Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Multan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60-00
Dera Ghazi Khan ...	1,677-00	60-00	...	...	...	...	...	...	...	...	...	...	...	...	...
Mianwali ...	1,730-24	1,728-24	...	3-00	...	...	...	3-00	1,580-00	...	...	...	...	1,580-00	151-24
Montgomery ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang ...	244-29	244-29	...	...	...	...	...	...	...	...	...	(a) 244-29	...	244-29	...
Jhang Municipality ...	1-22	...	1-22	...	...	...	...	1-22	...	...	...	...	...	...	1-22
Lyallpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hissar ...	139-66	83-23	...	...	...	...	...	...	...	...	...	...	...	...	83-23
Total Arid Districts	3,792-41	2,115-76	1-22	3-00	...	...	...	4-22	1,580-00	...	...	244-29	...	1,824-29	295-69
VERY DRY DISTRICTS.															
Ferozepore ...	423-00	286-00	...	10-00	...	...	...	10-00	...	4-00	...	...	...	4-00	292-00
Rohtak ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Karnal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Very Dry Districts	423-00	286-00	...	10-00	...	...	...	10-00	...	4-00	...	...	...	4-00	292-00
DRY DISTRICTS.															
Jhelum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gujranwala ...	46-00	45-00	...	...	1-00	...	...	1-00	...	...	...	...	...	...	46-00
Gurgaon ...	1,670-59	44-81	...	...	...	...	...	...	...	...	...	...	...	...	44-81
Amritsar ...	1-47	...	1-47	...	...	...	...	1-47	...	...	...	...	...	...	1-47
Amritsar Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delhi ...	657-36	509-38	...	0-75	...	...	...	0-75	...	1-72	...	490-00	...	491-72	18-41
Delhi Municipality ...	938-73	938-73	...	...	...	...	...	...	...	...	...	...	...	...	938-73
Jullundur ...	122-74	122-74	...	...	...	...	...	...	...	...	...	...	30-04	30-04	92-70
Ludhiana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Dry Districts	3,436-89	1,660-66	1-47	0-75	1-00	...	...	3-22	...	1-72	...	490-00	30-04	521-76	1,142-12
FAIRLY MOIST OR "FOREST" DISTRICTS.															
Jujrat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jujrat Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jurdaspur ...	25-80	25-80	...	...	...	...	...	...	...	...	...	...	...	...	25-80
Ambala ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sialkot ...	...	...	...	...	3-57	...	...	3-57	...	3-57	...	...	...	3-57	...
Sialkot Municipality ...	2-00	2-00	...	...	...	...	...	...	...	...	...	...	...	...	2-00
Hoshiarpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simla ...	57-50	57-50	...	1-50	...	...	...	1-50	...	...	...	...	...	...	59-00
Kangra ...	57-78	57-78	...	...	...	...	...	...	...	...	...	...	...	...	57-78
Kangra Municipality ...	137-75	122-30	...	...	...	...	...	...	...	...	...	...	...	...	122-30
Total "Forest" Districts	280-83	265-38	...	1-50	3-57	...	...	5-07	...	3-57	...	...	...	3-57	266-88
Total 1902-03 to 1904-05	7,933-13	4,327-80	2-69	15-25	4-57	...	...	22-51	1,580-00	9-29	...	734-29	30-04	2,358-62	1,996-69
Total 1899-1900 to 1901-02	6,408-16	2,601-31	...	...	...	...	...	2,123-12	...	...	...	...	...	395-16	4,329-27

(a). Transferred to the charge of the Deputy Commissioner.

(b). Transferred to the Civil Department.

(c). The area at the close of 1904-05 is reported as 66'61 acres.

(d). Plantation sold.

STATEMENT No. II (b).

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1902-03 TO 1904-05.

1	2	3	4						5						6
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.
Bari Doab Canal, 1st Division.	2,977'00	1,541'54	...	333'84	...	(a)	...	333'84	...	60'00	...	...	...	60'00	1,815'38
Bari Doab Canal, 2nd Division.	2,142'19	1,662'29	158'22	...	...	379'97	10'05	548'24	...	71'64	...	...	...	71'64	2,128'89
Bari Doab Canal, 3rd Division.	1,480'69	1,467'73	406'97	18'94	0'47	...	...	426'38	...	...	...	(b)	(c)	437'90	1,456'21
Upper Sutlej Division, Inundation Canals.	240'50	53'35	3'00	181'32	9'28	...	...	193'60	...	6'45	...	...	...	6'45	240'50
Multan Canals Division.	143'97	141'55	...	2'25	5'50	...	...	7'75	...	* 6'83	...	...	...	6'83	142'47
Dera Ghazi Khan Division, Indus Canals.	14'37	7'11	...	0'73	0'53	...	...	1'26	...	...	...	...	...	...	8'37
Muzaffargarh Canals Division.	19'19	15'22	...	0'54	...	...	...	0'54	...	...	...	...	0'10	0'10	15'66
Lower Sutlej Inundation Canals Division.	20'44	20'44	...	...	...	...	...	...	...	...	...	...	...	...	20'44
Western Jumna Canal, Karnal Division.	1,180'28	1,038'51	...	41'66	...	...	...	41'66	83'02	29'11	...	...	(d)	137'93	942'24
Western Jumna Canal, Delhi Division.	1,473'86	1,388'59	...	...	24'13	...	...	24'13	6'19	10'10	...	...	(e)	336'40	1,076'32
Western Jumna Canals, Hissar Division.	319'34	250'19	...	16'61	...	...	...	16'61	...	** 14'18	...	...	...	14'18	252'62
Sirhind Canal, Ferozepore Division.	3,255'68	1,996'43	451'04	51'43	...	(f)	11'23	513'70	...	105'00	...	...	(g)	292'11	2,218'02
Sirhind Canal, Ludhiana Division.	5,383'00	3,952'53	5'25	67'50	...	...	...	72'75	...	§ 66'20	...	(h)	11'23	77'43	3,948'57
Sirhind Canal, Patiala Division.	3,925'85	2,677'00	...	...	...	...	...	...	...	...	...	...	...	...	2,677'00
Sirhind Canal, Bhatinda Division.	2,087'00	1,165'97	...	73'60	...	...	...	73'60	...	...	...	...	...	...	1,239'57

(a). From 3rd Division.

(b). To 2nd Division.

(c). Includes 29'30 acres cut down for power channels.

* Failure due to canal having ceased to flow (unirrigated).

(d). Used for a silting reach 14'90 acres; timber used for Government Works, 10'90 acres.

(e). Cut down for the supply of fuel, &c., on the occasion of the Coronation Darbar. † Failure due to frost.

** Failure due to drought, frost and unsuitable soil; only portions irrigated.

(f). From Ludhiana.

(g). Destroyed by fire and cleared for building.

(h). To Ferozepore Division. § Failure due to frost.

STATEMENT No. II (b)—concluded.

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD
1902-03 TO 1904-05.

1	2	3	4						5						6
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
Chenab Canal, Khanki Division.	1,162.68	869.58	...	19.00	...	...	...	19.00	...	...	...	(i) 3.00	(j) 1.59	4.59	883.99
Chenab Canal, Lyallpur Division.	692.12	349.13	29.93	308.17	12.33	...	...	350.43	...	† 30.50	...	...	...	30.50	669.06
Chenab Canal, Lower Gugera Division.	583.00	121.18	32.33	299.59	2.83	(k) 4.30	...	339.05	...	‡ 20.82	...	157.19	...	178.01	282.22
Chenab Canal, Upper Gugera Division.	817.84	553.90	...	291.88	...	(m) 3.00	...	294.88	...	...	...	198.40	...	198.40	650.38
Chenab Canal, Jhang Division.	1,171.75	477.00	5.79	341.83	0.82	...	...	348.44	...	** 11.50	...	...	...	11.50	813.94
Chenab Canal, Buralla Division.	454.96	...	...	74.00	...	(p) 355.59	6.69	436.28	3.20	§ 45.92	...	(r) 4.30	...	53.42	382.86
Swat River Canal Division.	206.69	203.71	...	2.14	0.25	...	...	2.39	...	...	...	...	...	...	206.10
Jhelum Canal, 1st Division.	515.15	7.50	...	154.50	...	(s) 83.80	...	238.30	...	...	...	...	...	...	245.80
Jhelum Canal, 2nd Division.	171.90	90.30	...	171.90	8.80	...	...	180.70	...	(u) 60.50	...	(t) 83.80	...	144.30	126.70
Jhelum Canal, 3rd Division.	345.30	25.00	...	256.18	8.70	...	...	264.88	...	19.50	...	...	...	19.50	270.38
Jhelum Inundation Canal Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total 1902-03 to 1904-05.	30,784.75	20,075.75	1,092.53	2,707.61	73.64	837.89	16.74	4,728.41	92.41	548.25	...	837.89	602.64	2,081.19	22,722.97
Total 1899-00 to 1901-02.	28,326.27	18,744.91	...	...	...	...	...	4,923.70	...	...	...	...	...	3,592.86	20,075.75

- (i). To Upper Gugera.
(j). Felled.
† Failure due to bad soil.
(k). From Buralla Division.
(l). To Buralla Division. ‡ Failure due to bad soil and frost.
(m). From Khanki Division.
(n). To Buralla Division.
** Failures due to bad soil and frost.
(p). From Upper and Lower Gugera.
(r). To Lower Gugera. § Failure due to bad soil and frost.
(s). From 2nd Division.
(t). To 1st Division, (u) Failure due to want of rain.

STATEMENT No. II (a).

PROGRESS STATEMENT OF PLANTATIONS IN THE PROVINCIAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1902-03 TO 1904-05.

1	2	3	4						5						6
Division,	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
Rawalpindi Division.	2'90	...	...	...	2'90	...	...	2'90	...	1'18	...	...	...	1'18	1'78
Yangra Division ...	83'06	83'06	...	...	...	...	...	...	...	...	...	...	...	...	83'06
Jullundur Division	1'08	0'27	...	0'56	0'42	...	...	0'98	...	0'06	0'37	...	...	0'43	0'85
Ambala Division ...	0'59	...	...	...	0'59	...	...	0'59	...	0'20	...	...	...	0'20	0'39
Total 1902-03 to 1904-05.	87'58	83'33	...	0'56	3'91	...	...	4'47	...	1'44	0'37	...	...	1'81	35'99
Total 1899-1900 to 1901-02.	...	0'55	...	...	...	...	...	93'24	...	...	...	...	...	10'46	83'33

There are no plantations in the following Divisions : Simla, Lahore, Lyallpur, Gujranwala, Shahpur, Dera Ghazi Khan, Delhi and Ferozepore.

STATEMENT No. III (a).

PROGRESS STATEMENT OF GROVES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1902-03 to 1904-05.

1	2	3						4						5
DISTRICT.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.
	Acres and decimals.	Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	Acres and decimals.
ARID DISTRICTS.														
Muzaffargarh	268.32	...	...	...	4.15	...	4.15	...	5.69	...	...	(a) 27.95	33.64	238.83
Multan	6.13	...	...	...	...	...	...	...	0.30	...	...	(b) 3.41	3.71	2.42
Dera Ghazi Khan	10.00	...	...	...	...	...	...	...	...	...	...	...	...	10.00
Mianwali	647.04	...	20.57	0.68	...	...	21.25	636.00	1.00	...	...	...	637.00	31.29
Montgomery	746.00	...	...	...	...	...	...	...	...	...	...	...	...	746.00
Jhang	56.14	...	...	...	...	...	6.89	...	...	...	...	(c) 28.51	28.51	27.63
Jhang Municipality	4.09	6.89	...	...	...	...	...	...	...	...	...	...	...	10.98
Lyallpur	...	0.47	...	4.50	28.51	...	33.48	...	...	...	...	...	...	33.48
Shahpur	1,032.95	...	12.95	...	...	...	12.95	...	20.35	...	...	(f) 20.35	20.35	1,025.55
Hissar	332.89	...	...	...	(g) 3.00	...	5.67	...	...	...	...	(e) 6.10	18.22	308.57
Hissar Municipality	8.37	...	2.67	...	...	...	...	...	...	...	...	...	...	14.04
Total Arid Districts	3,111.93	7.36	36.19	5.18	35.66	...	84.39	636.00	27.34	...	34.61	49.58	747.53	2,448.79
VERY DRY DISTRICTS.														
Ferozepore	391.54	...	2.00	...	...	...	2.00	...	...	...	...	(h) 8.00	8.00	385.54
Rohtak	543.94	...	...	...	...	...	...	...	...	...	...	...	...	543.94
Lahore	16.73	...	...	...	...	...	...	...	...	...	...	...	...	16.73
Lahore Municipality	...	...	...	...	...	...	12.52	...	...	...	...	...	...	...
Karnal	350.79	12.52	...	...	...	...	...	...	...	...	...	...	...	363.31
Total Very Dry Districts	1,303.00	12.52	2.00	...	...	...	14.52	...	...	...	8.00	...	8.00	1,309.52
DRY DISTRICTS.														
Jhelum	5.62	1.66	...	...	...	...	1.66	...	...	...	...	(i) 1.66	1.66	5.62
Gujranwala	1.51	...	...	...	...	...	...	...	...	...	...	(j) 1.51	1.51	...
Gurgaon	282.02	...	...	...	...	...	0.84	...	...	...	...	...	...	282.86
Amritsar	47.77	...	0.29	0.10	...	...	0.39	...	0.08	...	...	...	0.08	48.08
Amritsar Municipality	1.75	...	...	...	...	...	...	...	...	...	...	...	...	1.75
Dehi	20.39	...	0.01	...	...	...	0.01	...	0.23	...	...	...	0.23	20.17
Delhi Municipality	1.50	...	...	...	...	...	...	...	...	...	...	...	...	1.50
Jullundur	26.03	...	...	0.87	...	...	0.87	...	...	...	...	...	...	26.90
Ludhiana	188.03	...	...	0.95	...	...	0.95	...	...	...	...	...	...	188.98
Rawalpindi	218.05	...	...	...	...	...	...	...	...	...	...	(k) 55.79	55.79	162.26
Rawalpindi Municipality	15.21	...	...	...	...	...	...	...	...	...	...	...	...	15.21
Attock	...	...	0.08	...	57.45	...	57.53	31.88	...	...	...	...	31.88	25.65
Attock Municipalities	...	3.01	...	0.04	...	...	3.05	...	...	...	...	...	...	3.05
Total Dry Districts	807.88	4.67	0.38	2.80	57.45	...	65.30	31.88	0.31	...	57.45	1.51	91.15	782.03
FAIRLY MOIST OR "FOREST" DISTRICTS.														
Gujrat	184.37	0.42	...	...	(m) 0.85	...	1.27	...	0.21	(n) 0.51	...	...	0.72	184.92
Gujrat Municipality	3.52	...	...	...	...	...	...	...	1.52	...	...	...	1.52	2.00
Gurdaspur	15.76	...	...	...	...	...	...	...	...	...	...	...	...	15.76
Ambala	18.21	...	...	0.80	...	...	0.80	...	0.03	...	0.05	0.12	0.20	18.81
Ambala Municipality	13.62	...	...	...	...	...	...	...	...	...	...	...	...	13.62
Sialkot	15.68	...	9.60	2.18	...	...	11.78	0.50	...	3.57	...	...	4.07	23.39
Hoshiarpur	16.23	...	...	...	...	...	...	...	...	...	...	...	...	16.23
Simla	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra	20.50	...	...	...	...	...	...	...	...	...	...	...	...	20.50
Kangra Municipality	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Fairly Moist or "Forest" Districts.	287.89	0.42	9.60	2.98	0.85	...	13.55	0.50	1.76	4.03	0.05	0.12	6.51	295.23
Total 1902-03 to 1904-05	5,510.70	24.97	48.17	10.96	93.96	...	178.06	668.38	29.41	4.08	100.11	51.21	853.19	4,835.57
Total 1899-1900 to 1901-02	5,015.18	...	...	...	...	...	1,123.39	...	...	...	...	...	627.87	5,510.70

(a) 27.06 acres, trees sold and area leased; 0.89 acres, trees sold, site used for building.

(b) Trees sold.

(c) Transferred to Lyallpur.

(d) Transferred from Jhang.

(e) Said to be transferred to the P.W.D., but not credited in their statements.

(f) Area given up for cultivation.

(g) Transferred from the Canal Department.

(h) Areas made over to owners.

(i) Transferred to Attock.

(j) Land used as building site.

(k) Transferred to Attock.

(l) From Jhelum and Rawalpindi.

(m) From Gujranwala Provincial Division.

(n) Transferred to nurseries.

(p) Transferred to the P. W. D.

STATEMENT No. III (c).

PROGRESS STATEMENT OF GROVES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1902-03 to 1904-05.

1	2	3						4						5
DIVISION.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
		Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	Acre and deci-mals.	
Rawalpindi Division	217.27	...	...	0.02	...	...	0.02	...	0.74	...	...	...	0.74	216.55
Simla Division	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra Division	0.48	...	...	...	...	...	...	...	...	...	...	...	...	0.48
Lahore Division	480.24	2.68	...	...	...	...	2.68	...	...	...	(a) 459.80	(b) 14.00	473.80	9.12
Jullundur Division	2.75	...	0.50	0.37	...	...	0.42	...	0.42	...	...	...	0.42	2.75
Lyallpur Division	270.36	...	...	...	...	...	...	...	...	...	(c) 268.66	1.70	270.36	...
Gujranwala Division	...	...	...	...	(d) 270.98	...	270.98	...	...	...	0.85	...	0.85	270.13
Shahpur Division	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dera Ghazi Khan Division ...	2.96	...	0.10	...	...	...	0.10	...	...	...	...	...	...	3.06
Ambala Division	...	...	...	0.32	(e) 0.05	...	0.37	...	0.24	...	...	...	0.24	0.13
Delhi Division	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ferozepore Division	...	...	...	...	(f) 459.80	...	459.80	459.80	...	...	...	...	459.80	...
Total 1902-03 to 1904-05 ...	974.06	2.68	0.15	0.71	730.83	...	734.37	459.80	1.40	...	729.31	15.70	1,206.21	502.22
Total 1899-1900 to 1901-02 ...	1,012.97	...	...	...	...	...	52.50	...	...	...	...	...	91.41	974.06

(a) Transferred to Ferozepore Provincial Division.

(b) Sold.

(c) To Gujranwala Provincial Division.

(d) 268.66 from Lyallpur Provincial Division.

2.32 said to have been received from Siālkot District Board not shown in Siālkot statements.

(e) From District Board.

(f) Transferred from Lahore.

STATEMENT No. IV (a).
PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1902-03 TO 1904-05.

1	2	3	4					5					6
District.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.
	Miles and decimals.	Miles and decimals.	Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.
			Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
ARID DISTRICTS.													
Muzaffargarh	304.60	126.24	8.55	6.18	...	...	14.73	...	...	...	...	...	140.97
Mulcán	1,253.28	324.40	...	10.10	...	...	10.10	...	11.38	...	...	...	323.12
Dera Gházi Khan	105.15	30.15	...	...	...	...	...	...	...	...	...	...	30.15
Miánwáli	52.00	25.55	...	36.00	...	...	36.00	...	10.00	...	...	...	51.55
Montgomery	200.00	133.00	...	...	...	...	...	...	...	...	(a) 33.00	...	100.00
Jhang	700.00	115.00	...	166.00	2.75	...	168.75	...	...	...	(b) 229.25	...	54.50
Jhang Municipality	48.09	21.82	...	...	...	...	...	5.33	...	...	...	...	16.49
Lyallpur	1,030.00	...	...	...	(c) 229.25	...	229.25	...	...	...	...	...	229.25
Sháhpur	541.12	522.55	...	33.89	11.00	...	44.89	...	17.47	40.00	...	...	509.97
Sháhpur Municipality	16.88	16.88	...	...	...	...	...	...	...	...	...	...	16.88
Hissár	893.81	103.05	...	4.00	...	...	4.00	...	...	...	...	...	107.05
Hissár Municipality	5.59	5.21	...	...	...	...	...	...	...	...	...	...	5.21
Total Arid Districts	4,650.52	1,423.85	8.55	256.17	243.00	...	507.72	5.33	38.85	40.00	262.25	...	1,585.14
VERY DRY DISTRICTS.													
Ferozepore	733.84	528.75	...	22.00	...	...	22.00	...	7.00	...	...	...	543.75
Rohatak	473.08	201.18	...	8.00	...	...	8.00	...	2.00	...	...	...	207.18
Lahore	314.41	245.44	...	19.50	...	...	19.50	...	...	...	...	...	264.94
Lahore Municipality	58.39	53.68	...	2.00	...	...	2.00	...	...	...	...	...	55.68
Karnál	440.27	114.59	...	14.00	...	...	14.00	...	...	...	...	...	128.59
Karnál Municipality	8.45	7.73	...	0.22	...	...	0.22	...	...	...	...	...	7.95
Total Very Dry Districts	2,028.44	1,151.37	...	65.72	...	...	65.72	...	9.00	...	...	...	1,208.09
DRY DISTRICTS.													
Jhelum	459.01	353.51	...	15.18	...	...	15.18	...	3.96	...	(e) 53.90	...	310.83
Jhelum Municipality	22.35	20.78	...	1.57	...	...	1.57	...	0.46	...	...	...	21.89
Gujránwála	538.38	186.76	...	17.50	...	...	17.50	...	...	...	...	...	204.26
Gurgáon	396.15	230.13	...	...	...	...	...	...	...	...	...	...	230.13
Amritsar	285.48	209.30	...	7.00	...	...	7.00	...	5.00	13.20	...	...	198.10
Amritsar Municipality	66.00	58.09	...	...	...	...	...	...	...	...	...	...	58.09
Delhi	340.05	156.02	...	4.75	...	...	4.75	...	2.70	2.10	...	...	155.97
Delhi Municipality	38.00	25.00	...	(f) 6.80	...	...	6.80	...	...	...	...	...	31.80
Jullundur	283.80	234.93	...	...	...	...	...	...	...	...	...	...	234.93
Ludhiána	291.81	222.56	...	10.00	...	...	10.00	...	7.00	...	...	...	225.56
Ráwalpindi	434.00	324.97	...	24.00	...	...	24.00	...	...	28.00	(g) 16.97	...	304.00
Ráwalpindi Municipality	18.00	10.46	...	1.00	...	...	1.00	...	...	...	(h) 0.46	...	11.00
Attock	715.09	...	22.40	5.33	70.87	...	98.60	...	0.25	0.44	...	0.06	97.85
Attock Municipalities	5.23	...	3.55	0.70	...	...	4.25	...	...	...	...	...	4.25
Total Dry Districts	3,902.35	2,032.51	25.95	87.03	77.67	...	190.65	...	19.37	43.74	70.87	0.52	2,088.66
FAIRLY MOIST OR "FOREST" DISTRICTS.													
Gujrát	612.90	435.81	...	54.19 (j) 1.90	...	...	56.09	...	19.81	1.48	...	19.79	450.82
Gujrát Municipality	12.33	9.71	...	1.88 (j) 1.48	...	...	3.36	...	1.30	...	...	...	11.77
Gurdáspur	610.00	486.03	...	2.50	...	...	2.50	...	6.75	...	...	...	487.78
Ambala	277.96	154.80	2.27	2.16	...	...	4.43	5.91	1.05	2.65	21	...	128.55
Siálkot	842.50	581.37	...	40.75	...	...	40.75	...	19.50	48.75	...	(m) 1.50	552.37
Siálkot Municipality	6.50	5.75	...	...	...	...	...	...	...	...	...	...	5.75
Hoshiárpur	513.16	487.75	...	7.00	...	...	7.00	...	...	...	...	...	494.75
Simla	...	...	...	...	...	...	...	...	...	...	...	...	...
Kángra	501.59	454.28	...	81.23	...	...	81.23	...	39.30	...	...	...	496.21
Dharmśála Municipality	6.35	6.35	...	...	...	...	...	...	...	...	...	...	6.35
Total Fairly Moist or "Forest" Districts	3,383.29	2,621.85	2.27	189.71	3.38	...	195.36	15.91	81.71	52.88	21.07	21.29	2,634.35
Total 1902-03 to 1904-05	13,964.60	7,229.58	36.77	598.68	324.05	...	959.45	11.24	148.93	136.62	354.19	21.81	7,516.24
Total 1899-1900 to 1901-02	13,914.08	6,941.46	...	...	...	...	733.40	...	...	...	...	...	7,229.58

(a). Said to have been transferred to Canal Department, not traceable in their returns.

(b). Transferred to Lyallpur.

* Transferred from Lyallpur Provincial Division.

(c). From Jhang.

(d). From Sháhpur Provincial Division.

(e). To Attock.

(f). Received with a road from the Public Works Department.

(g). To Attock.

(h). Proximity to building sites.

(i). From Jhelum and Ráwalpindi.

(j). From Gujránwála Provincial Division.

(k). Causes not reported.

(l). Transferred to Provincial Division.

(m). Land given for cultivation.

STATEMENT No. IV (b).

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1902-03 to 1904-05.

1	2	3	4					5						6
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transferred to other management.	Other causes.	Total deductions.	
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
Bári Doáb Canal, 1st Division.	155.70	146.16	...	9.90	...	...	9.90	...	1.80	...	...	...	1.80	154.26
Ditto, 2nd "	100.80	87.60	...	3.00	20.20	...	23.20	...	10.00	...	...	...	10.00	100.80
Ditto, 3rd "	114.00	93.20	...	20.80	...	...	20.80	0.20	6.40	...	20.20	...	26.80	87.20
Upper Sutlej Division, Inundation Canals.	358.12	332.27	...	77.47	...	...	77.47	7.40	44.22	...	...	...	51.62	358.12
Multán Canals Division ...	395.90	292.37	...	17.94	...	...	17.94	...	* 13.09	...	...	...	13.09	297.22
Dera Ghāzi Khan Division, Indus Canals.	426.95	187.59	0.01	25.26	...	...	25.27	...	3.42	25.67	...	5.10	34.19	178.67
Muzaffargarh Canals Division.	220.70	148.12	...	0.94	...	...	0.94	...	...	...	...	...	...	149.06
Lower Sutlej Inundation Canals Division.	560.46	251.00	...	...	...	...	...	...	...	5.64	...	...	5.64	245.36
Western Jumna Canal, Karnal Division.	546.73	242.04	...	44.50	...	...	44.50	...	7.00	...	...	...	7.00	279.54
Western Jumna Canal, Delhi Division.	506.24	308.81	...	47.85	...	...	47.85	6.20	13.70	...	...	...	19.90	336.76
Western Jumna Canal, Hissar Division.	305.98	188.75	...	36.29	...	...	36.29	...	4.00	17.67	...	...	21.67	203.37
Sirhind Canal, Ferozepore Division.	290.20	156.63	...	18.46	...	...	18.46	65.01	2.30	...	...	...	67.31	107.78
Sirhind Canal, Ludhiāna Division.	252.30	170.97	...	...	...	...	...	53.34	3.75	...	(a) 0.78	...	57.87	113.10
Sirhind Canal, Patiala Division.	221.74	166.24	...	2.40	...	...	2.40	...	...	...	...	...	...	168.64
Sirhind Canal, Bhatinda Division.	126.80	57.11	...	...	(b) 0.78	...	0.78	...	...	...	...	...	...	57.89
Chenāb Canal, Khānki Division.	175.69	112.66	...	0.50	...	...	0.50	...	...	1.50	(c) 3.80	...	5.30	107.76
Chenāb Canal, Lyallpur Division.	354.20	211.11	...	32.37	...	...	32.37	3.60	10.28	...	...	...	13.88	229.60
Chenāb Canal, Lower Gugera Division.	255.40	24.59	6.78	62.89	...	...	69.67	...	27.64	...	(d) 13.20	...	40.84	53.42
Chenāb Canal, Upper Gugera Division.	587.49	327.28	...	136.14	(e) 3.80	...	139.94	...	33.16	...	(d) 96.60	...	129.76	337.46
Chenāb Canal, Jhang Division.	620.60	138.60	...	85.76	...	...	85.76	...	11.68	...	...	...	11.68	212.68
Chenāb Canal, Buralla Division.	314.81	...	1.72	11.40	(f) 109.80	...	122.92	...	31.30	...	...	...	31.30	91.62
Swāt River Canals Division	286.00	228.33	...	14.98	...	...	14.98	27.40	...	...	...	...	27.40	215.91
Jhelum Canal, 1st Division	165.44	3.00	3.84	18.30	40.00	...	62.14	...	5.00	...	...	...	5.00	60.14
Ditto, 2nd "	556.70	140.00	...	274.00	...	...	274.00	43.00	98.40	...	40.00	...	181.40	232.60
Ditto, 3rd "	337.00	25.00	...	66.00	4.45	...	70.45	23.00	31.50	...	...	...	64.50	40.95
Jhelum, Inundation Canals Division.	250.29	66.26	9.05	...	...	...	9.05	...	...	...	4.45	...	4.45	70.86
Total 1902-03 to 1904-05	8,486.24	4,105.59	21.40	1,007.15	179.03	...	1,207.58	229.15	358.64	50.48	179.33	5.10	822.40	4,490.77
Total 1899-1900 to 1901-02	8,033.23	3,580.63	...	...	...	...	1,658.98	...	...	...	...	...	1,134.02	4,105.59

* Unirrigated.

(a) Transferred to Bhatinda Division.

(b) Not shown in the Bhatinda statement.

(c) To Upper Gugera.

(d) To Buralla Division.

(e) From Khānki.

(f) From Lower and Upper Gugera.

STATEMENT No. IV (c).

PROGRESS STATEMENT OF AVENUES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1902-03 TO 1904-05.

1	2	3	4						5						6
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transferred to other management.	Other causes.	Total deductions.		
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
Rawalpindi Division	250'11	90'88	...	...	(g) 1'46	...	1'46	...	...	...	...	...	...	...	92'34
Simla Division	0'34	0'34	...	...	...	...	...	...	...	...	...	...	...	...	0'34
Kangra Division	188'97	19'74	...	...	...	...	...	...	...	...	...	...	...	...	19'74
Lahore Division	193'26	122'88	...	2'00	...	...	2'00	...	1'50	0'60	(h) 37'16	...	39'26	85'62	
Jullundur Division	234'01	173'41	...	14'13	...	...	14'13	...	3'08	2'10	...	...	5'18	182'36	
Lyalpur Division	15'00	107'10	...	0'80	...	...	0'80	...	0'70	...	(i) 100'35	...	101'05	6'85	
Gujranwala Division	157'09	...	2'23	1'20	(j) 97'60	...	101'03	...	0'41	1'30	(k) 1'90	...	3'61	97'42	
Shahpur Division	20'00	...	1'00	24'00	...	...	25'00	...	5'00	...	(l) 11'00	...	16'00	9'00	
Dera Ghazi Khan Division	146'10	70'49	...	2'53	(m) 15'57	...	18'10	7'54	0'62	...	...	...	8'16	80'43	
Ambala Division	197'75	160'91	0'93	26'68	(n) 21'07	...	48'68	8'77	0'20	14'74	...	...	23'71	185'68	
Delhi Division	120'00	129'75	...	...	...	...	...	...	...	...	(p) 28'00	...	28'00	101'75	
Ferozepore Division	63'27	...	...	1'50	(r) 49'59	...	51'09	3'85	0'99	3'75	...	...	8'59	42'50	
Total 1902-03 to 1904-05	1,585'93	875'50	4'16	72'84	185'29	...	262'29	20'16	12'50	22'49	178'41	...	233'56	904'23	
Total 1899-1900 to 1901-02	1,518'56	812'68	...	...	...	...	295'27	...	...	...	...	...	232'45	875'50	

(g) Transferred from Military Works.

(h) To Ferozepore Provincial Division. 21'59; to Dera Ghazi Khan 15'57.

(i) To Jhang District 2'75; to Gujranwala Provincial Division 97'60.

(j) From Lyallpur Provincial Division.

(k) To Gujrat District.

(l) To District Board.

(m) From Lahore Provincial Division.

(n) Transferred from District Ambala.

(p) To Ferozepore.

(r) From Lahore Provincial Division 21'59; from Delhi 28'00.

STATEMENT No. V (a).

INCOME FROM ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD
1902-03 to 1904-05.

1	2	3	4	5	6	7	8
DISTRICT.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh	2,600	105	...	10,856	850½	14,411	
Multán	7,786	...	...	4,365	6	12,107	
Dera Gházi Khan	863	...	...	10	...	873	
Miánwáli	1,443	...	777	476	...	2,696	
Montgomery	2,667	...	...	1,765	...	4,432	
Jhang	4,237	...	...	2,092	...	6,329	
Do. Municipality	248	...	...	1,568	822	2,638	
Lyalpur	...	...	...	57	...	57	
Shekhpur	6,693	...	...	12,560	11,208	30,461	
Hissár	3,042	2,495	...	1,857	...	7,394	
Do. Municipality	2,124	...	...	174	...	2,298	
Ferozepore	2,143	...	10,089	17,659	...	29,891	
Rohtak	2,588	...	...	4,901	80	7,519	
Lahore	19,488	...	...	16,512	...	36,000	
Do. Municipality	22,662	...	...	4,561	3,214	30,437	
Karnál	...	10	...	2,196	217	2,423	
Jhelum	4,527	...	...	...	6,492	11,019	
Gujránwála	4,752	...	...	10,326	...	15,078	
Gargáon	235	...	495	7,160	...	7,890	
Amritsar	112	...	...	11,465	173	11,750	
Do. Municipality	14,845	...	...	6,141	12,818	33,804	
Delhi	592	...	3,674	3,856	...	8,122	
Do. Municipality	19,092	...	13,998	...	1,122	34,212	
Jullundur	1,952	804	5,972	17,789	3,610	30,127	
Ludhiána	425	2,360	...	17,813	...	20,598	
Ráwalpindi	3,797	...	...	5,981	...	9,778	
Do. Municipality	2,646	...	...	1,871	...	4,517	
Attock	3,565	...	...	1,062	138	4,765	
Do. Municipality	569	20	...	191	...	780	
Gujrát	731	...	...	35,669	335	36,735	
Do. Municipality	516	...	...	1,040	137	1,693	
Gurdáspur	5,209	629	1,591	14,321	4,172	25,922	
Ambala	882	5	...	7,248	...	8,135	
Siálkot	7,433	750	...	67,947	295	76,425	
Hoshiárpur	2,494	...	...	26,724	874	30,092	
Simla	8,736	584	7,399	...	2,028	18,697	
Kángra	697	...	...	3,342	...	4,039	
Total 1902-03 to 1904-05 ...	1,62,341	7,712	43,995	3,21,555	48,541	5,84,144	
Total 1899-1900 to 1901-02	1,58,223	9,598	35,282	2,75,282	43,235	5,21,620	

STATEMENT No. V (b).

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD
1902-03 TO 1904-05.

1	2	3	4	5	6	7	8
Division.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Báni Doáb Canal, 1st Division ...	56	...	33,535	559	10,660	44,810	
Do., 2nd do. ...	11	...	20,356	...	11,108	31,475	
Do., 3rd do. ...	...	...	15,450	...	1,059	16,509	
Upper Sutlej Division, Inundation Canals.	...	...	5,750	...	1,336	7,086	
Multán Canals Division ...	531	...	13,899	...	1,702	16,132	
Dera Gházi Khan Division, Indus Canals.	...	...	243	15,711	...	15,954	
Muzaffargarh Canals Division ...	740	...	11,808	...	1,525	14,073	
Lower Sutlej Inundation Canals Division.	190	...	7,766	...	1,157	9,113	
Western Jumna Canal, Karnál Division.	1,099	...	5,630	2,229	1	8,959	
Western Jumna Canal, Delhi Division.	...	...	22,402	...	1,796	24,201	
Western Jumna Canal, Hissár Division.	50	...	23,625	...	1,190	29,865	
Sirhind Canal, Ferozepore Division...	...	...	14,602	...	3,434	18,036	
Do., Ludhiána do.	729	...	13,872	...	20,561	35,162	
Do., Patiala do.	748	...	18,568	...	...	19,316	
Do., Bhatinda do.	6	...	5,080	...	4,479	9,565	
Chenáb Canal, Khánki Division ...	...	...	6,742	...	...	6,742	
Do., Lyallpur do. ...	225	...	3,352	395	...	3,972	
Do., Lower Gugera Division.	...	...	...	...	19	19	
Do., Upper Gugera Division.	626	...	119	112	...	857	
Do., Jhang Division ...	...	...	...	...	446	446	
Do., Buralla do. ...	22	...	...	...	1,230	1,252	
Swát River Canals Division ...	305	...	1,652	588	...	2,545	
Jhelum Canal, 1st do. ...	...	...	...	...	...	...	
Do. 2nd do. ...	...	...	...	...	...	...	
Do. 3rd do. ...	...	...	14	...	...	14	
Jhelum Inundation Canals Division...	...	...	...	798	...	798	
Total 1902-03 to 1904-05 ...	5,338	...	2,29,465	20,892	61,706	3,16,901	
Total 1899-1900 to 1901-02 ...	1,610	88	1,12,742	45,491	61,802	2,21,713	

STATEMENT No. V (c).

INCOME FROM ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE TRIENNIAL PERIOD 1902-03 to 1904-05.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Ráwalpindi Division	184	...	21	2,838	5,742	8,735	
Simla Division	...	...	...	...	...	...	
Kángra Division	...	...	...	...	...	...	
Lahore Division	327	...	...	2,448	1,032	3,807	
Jullundur Division	...	...	...	14,712	6,213	20,925	
Lyallpur Division	...	...	...	66	26	92	
Gujránwála Division	73	...	...	11,635	6,818	18,526	
Sháhpur Division	...	...	...	...	...	...	
Dera Gházi Khan Division	...	...	...	778	...	778	
Ambala Division	...	...	...	5,540	2,326	7,866	
Delhi Division	...	...	...	2,435	2,865	5,300	
Ferozepore Division	...	...	...	1,388	1,530	2,918	
Total 19 02-03 to 1904-05	534	...	21	41,840	26,552	68,947	
Total for 1899-1900 to 1901-02	1,089	...	298	47,100	35,756	84,243	

STATEMENT No. VI (a).

EXPENDITURE ON ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD
1902-03 to 1904-05.

1	2	3	4	5	6	7	8	9	10	11
DISTRICT.	WORKS.								ESTABLISHMENT.	Total.
	Ornamental gardens.		Nurseries.		Plantation and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.	
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantation and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Muzaffargarh	5,811	...	...	...	...	...	11,500	400	1,800	19,511
Multan	25,659	...	324	...	...	...	9,658	...	...	35,641
Dera Ghazi Khan	181	...	...	...	...	...	237	...	1,819	2,237
Mianwali	509	1,421	...	1,312	818	406	3,580	6,645	4,508	19,199
Montgomery	8,023	...	...	...	...	...	...	...	...	8,023
Jhang	12,555	...	324	...	...	...	28,175	...	4,311	45,365
Do. Municipality	1,693	...	...	...	...	...	2,567	...	...	4,260
Lyallpur	...	...	...	...	...	...	...	906	3,222	4,128
Shahpur	3,733	...	...	...	...	...	9,992	6,673	1,170	21,568
Hissar	3,556	...	3,495	...	...	...	3,334	...	...	10,385
Do. Municipality	5,086	...	24	...	...	...	608	...	...	5,718
Ferozepore	6,619	...	...	...	1,448	753	13,291	2,647	3,213	27,971
Rohtak	3,073	...	552	...	...	...	7,496	116	...	11,237
Lahore	16,959	...	293	187	...	...	5,261	1,978	2,601	27,279
Do. Municipality	58,165	...	...	...	...	...	11,707	...	...	69,872
Karnal	...	...	1,097	20	...	...	7,236	516	2,060	10,929
Jhelum	9,079	...	...	...	...	...	...	...	7,361	16,440
Gujranwala	17,426	...	...	10	1,445	...	9,849	1,011	2,762	32,503
Gurgaon	2,542	...	144	...	347	...	3,099	...	743	6,875
Amritsar	1,266	...	348	...	...	...	17,274	...	200	19,088
Do. Municipality	46,193	...	...	...	...	...	...	...	3,540	49,733
Delhi	5,766	...	...	...	660	...	4,214	1,716	180	12,536
Do. Municipality	53,569	...	...	...	1,631	...	2,569	...	...	57,769
Jullundur	5,740	...	2,275	...	341	...	9,130	...	...	17,486
Ludhiana	8,464	...	5,547	...	...	...	13,670	...	918	28,629
Rawalpindi	3,016	...	...	...	...	...	3,937	...	...	6,953
Do. Municipality	7,976	...	...	...	...	...	897	...	...	8,873
Attock	1,678	2,896	...	...	...	...	2,703	...	...	7,277
Do. Municipalities	988	...	...	...	...	...	1,082	...	...	2,070
Gujrat	3,407	144	1,066	...	...	...	11,228	...	1,588	17,433
Do. Municipality	1,278	...	...	...	...	...	700	...	...	1,978
Gurdaspur	5,150	...	850	...	...	...	13,888	...	...	19,888
Ambala	5,797	...	90	90	...	...	4,490	...	...	10,467
Sialkot	12,725	...	2,400	305	...	...	12,100	6,420	11,839	45,789
Hoshiarpur	3,255	...	...	...	...	...	14,853	...	1,328	19,436
Simla	5,030	...	535	65	3,530	126	...	...	3,023	12,309
Kangra	2,890	...	...	...	...	...	3,320	...	...	6,210
Total 1902-03 to 1904-05 ...	3,54,857	4,461	19,364	1,989	10,220	1,285	2,43,645	29,028	58,216	7,23,065
Total 1899-1900 to 1901-02 ...	3,39,802	2,590	19,311	594	15,981	...	2,24,652	22,370	57,497	6,82,797

STATEMENT No. VI (b).

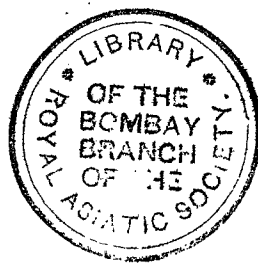
EXPENDITURE ON ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD 1902-03 to 1904-05.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	WORKS.								ESTAB- LISH- MENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantation and afforestation.		Groves and avenues.		General supervising establishment, in- cluding office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantation and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bári Doáb Canal, 1st Division	11,817	...	...	...	12,829	10,693	2,840	277	...	38,366	
Do., 2nd do.	1,587	...	...	...	12,862	6,922	3,211	150	...	24,682	
Do., 3rd do.	4,779	200	1,594	210	5,573	3,610	810	3,557	642	20,975	
Upper Sutlej Division, Inundation Canals ...	15,755	...	...	...	8,090	240	12,634	6,224	...	42,943	
Multán Canals Division	14,157	88	...	...	2,772	510	1,140	...	...	18,667	
Dera Gházi Khan Division, Indus Canals ...	250	450	690	184	2,590	175	4,998	1,600	170	11,107	
Muzaffargarh Canals Division	5,057	245	...	...	...	18	...	144	...	5,464	
Lower Sutlej Inundation Canals Division ...	8,316	...	...	...	...	...	...	...	...	8,316	
Western Jumna Canal, Karnál Division ...	11,493	634	2,810	1,166	4,801	266	5,264	113	...	26,547	
Do., Delhi do.	18,015	...	...	...	4,951	...	366	...	...	23,332	
Do., Hissár do.	10,565	638	1,181	375	2,514	348	8,050	552	2,277	26,520	
Sirhind Canal, Ferozepore Division	7,368	...	...	...	8,150	1,206	...	...	...	16,724	
Do., Ludhiána do.	9,057	...	700	...	3,988	191	1,516	...	...	15,452	
Do., Patnála do.	6,668	...	...	...	11,844	...	...	...	...	18,532	
Do., Bhatinda do.	10,174	...	...	...	4,352	3,124	354	...	...	18,004	
Chenáb Canal, Khánki do.	2,230	294	1,403	25	3,625	2,068	...	...	6,726	16,371	
Do., Lyallpur do.	8,933	1,065	...	72	6,080	6,971	15,350	2,644	1,304	42,419	
Do., Lower Gugera do.	1,311	...	...	...	7,878	19,655	1,544	1,341	...	31,729	
Do., Upper Gugera do.	5,343	55	...	...	8,288	3,441	14,162	3,163	9,156	43,608	
Do., Jhang do.	13,614	2,351	...	651	15,722	7,469	6,489	3,120	...	49,416	
Do., Buralla do.	710	329	...	...	2,673	610	1,964	...	...	6,286	
Swát River Canals Division	1,487	...	44	...	4,316	1,563	645	153	...	8,208	
Jhelum Canal, 1st do.	4,967	768	3,397	...	5,615	1,239	4,010	1,836	...	21,832	
Do., 2nd do.	2,910	2,812	...	...	5,677	34,415	7,528	9,659	...	63,001	
Do., 3rd do.	2,658	...	...	...	5,218	4,841	2,304	4,906	7,888	27,315	
Jhelum Inundation Canals Division	...	...	...	...	...	...	...	...	...	...	
Total 1902-03 to 1904-05	1,79,211	9,929	11,819	2,683	1,50,408	1,09,485	95,179	39,439	27,663	6,25,816	
Total 1899-1900 to 1901-02	50,469	7,641	16,389	5,454	1,61,294	55,678	32,962	14,282	34,961	4,21,540	

STATEMENT No. VI (c).

EXPENDITURE ON ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1902-03 to 1904-05.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	WORKS.								ESTAB- LISH- MENT.	Total..	REMARKS.
	Ornamental gardens.		Nurseries.		Plantation and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantation and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Ráwalpindi Division	432	...	306	164	...	...	4,779	...	...	5,681	
Simla Division	...	...	...	...	...	...	...	...	...	...	
Kángra Division	...	...	...	...	...	...	...	...	...	...	
Lahore Division	1,050	...	600	...	...	...	8,878	...	...	10,528	
Jullundur Division	...	...	718	...	3,502	...	1,538	588	207	6,553	
Lyallpur Division	...	...	...	...	...	...	1,378	...	...	1,378	
Gujránwála Division	1,440	...	216	14	...	...	4,229	...	180	6,079	
Sháhpur Division	...	...	360	...	...	...	...	8,875	600	4,835	
Dera Gházi Khan Division	...	...	300	80	...	...	6,678	454	1,349	8,861	
Ambala Division	...	...	259	181	539	108	3,034	291	...	4,412	
Delhi Division	...	...	...	...	...	...	2,122	...	...	2,122	
Ferozepore Division	...	...	...	125	...	...	1,969	...	...	2,094	
Total 1902-03 to 1904-05 ...	2,922	...	2,759	564	4,041	108	34,605	5,208	2,336	52,543	
Total 1899-1900 to 1901-02 ...	16,013	3,000	1,457	1,143	3,720	153	31,265	1,553	1,039	59,343	



PANJAB ARBORICULTURE REPORT
1905-06 TO 1907-08.



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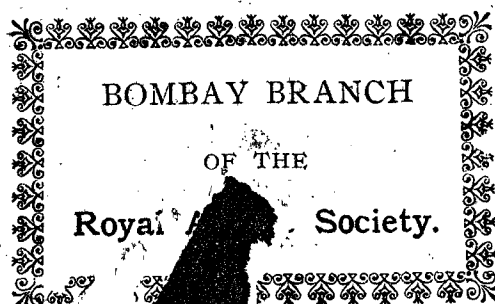
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PROGRESS REPORT

ON

ARBORICULTURE IN THE PANJAB

• FOR THE TRIENNIAL PERIOD 1905-1906 TO 1907-1908.

Published by Authority



PRINTED AT THE "GAZETTE" PRESS,
Sole Contractors for the Government.

READ—

The Progress Report on Arboriculture in the Punjab for the triennium 1905-06 to 1907-08 submitted with the letter from the Conservator of Forests, Punjab, No. 4235, dated 23rd of November 1908.

REMARKS.—The report has been received four months late owing to the delay of certain local bodies in sending in their reports.

2. The results of the work on arboriculture during the triennium 1905-06 to 1907-08 are clearly summed up in the general remarks of the Conservator of Forests in paragraphs 17 to 19, and the Lieutenant-Governor fully concurs in the views therein expressed.

There has been a continuous improvement in arboricultural work on roads in the province for the last ten years. In 1899 there were 11,334 miles of avenues maintained by all agencies in the Punjab, whereas in 1908 there are 14,362 miles, an increase of 3,000 miles or over 25 per cent. The rate of progress has been accelerated in the past three years owing partly to the opening up of new railways, roads and canals, partly to the stimulus given by the Government of India in a resolution No. 21—34-14 issued in July 1905, and partly to the annual grant of one lakh from Imperial revenues made to district boards for arboriculture in the year 1906. At the same time care is often not taken to fill up gaps in the old avenues and much of the increase is easily obtained in the canal tracts or by planting up very small trees which rarely survive. The area under nurseries, groves and plantations appears to have decreased considerably in the same period, but the statistics are misleading owing to transfers to the North-West Frontier Province and to inaccuracies in the earlier figures.

3. So far as the reports show, the progress in planting roadside trees has been great, but it may well be that a more careful system of working would give better results, and the Lieutenant-Governor would take this opportunity of again directing attention to the resolution of the Government of India already referred to. In paragraph 5 of that resolution emphasis is laid on the necessity of concentrating effort and of proceeding in accordance with a definite working-plan. The report shows that the Lahore district board has decided to concentrate operations on short lengths of road at one time, and it is understood that this sound policy is adopted in several other districts also. But the proportion of failures in planting operations for the province as a whole is still very high, and His Honour would urge on all bodies and departments interested in arboriculture the necessity of working on limited areas at one time. Their efforts will then have a greater chance of success and the present serious waste of public money should be considerably reduced.

4. It appears that all the districts of the Delhi division and a few others have framed working-plans which have been approved by the Commissioner or the Conservator of Forests. In future reports it should be specially noted in all cases whether a working-plan exists and how far its prescriptions have been carried out.

5. The Buildings and Roads Branch of the Public Works Department is still the only department that reaps a profit from arboriculture. With the construction of new roads and canals the expenditure of district boards and of the Irrigation Department is bound to be heavy, and the return to this expenditure must be deferred for a long period. But deficits of 30 per cent. on expenditure in the case of local bodies and 50 per cent. in the case of the Irrigation Department do not appear to be warranted. The training of the staff employed on arboriculture requires to be improved and stricter supervision over their operations is badly wanted. In the case of local bodies much has been done in certain districts by interesting individual members in the work and entrusting them with the charge of particular areas near their own homes, and Sir Louis Dane sees in this policy the best opportunity of obtaining adequate supervision over the

staff. In the Karnal, Hoshiarpur and Gujranwala district, daroghas are employed who have been trained in the Imperial Forest College at Dehra Dun, and it would appear advisable if success is obtained in these districts, that other districts should follow this example.

6. A suggestion has been made by Sir James Wilson that with a view to the encouragement of arboriculture district boards and municipalities should be desired to make a periodical valuation of their standing timber. The suggestion has the full approval of the Lieutenant-Governor, and he desires that the Public Works Department and all local bodies shall make such a valuation and submit a note of the results every three years along with the triennial report. At present the quick appreciation of the value of standing timber and the possibilities of profit from tree-growing appear to be insufficiently realized, and the proposal should help to bring home to those concerned how important an asset their timber is.

7. In the past three years several steps have been taken with a view to the encouragement of arboriculture. The Irrigation Department has reduced its rates for watering roadside trees; district boards have been urged to adopt a liberal policy with regard to the grant of rewards for arboricultural work; an abridged edition of the manual of arboriculture has been issued, and there has been a considerable demand for it from other provinces as well as in the Punjab; and finally it has been ordered by the Lieutenant-Governor that except in special cases district boards shall have control of all avenues for the expenditure on which they are responsible, even where the road itself is maintained by the Public Works Department.

ORDER—Ordered that the above remarks be printed and circulated with the report as usual; also that they be published in the *Punjab Government Gazette* and forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, and the Conservator of Forests, Punjab.

By order of His Honour the Lieutenant-Governor,

W. S. HAMILTON,

Offg. Secretary to Government, Punjab.

No. 4235.
FOREST DEPARTMENT, PUNJAB.

FROM

C. P. FISHER, ESQUIRE,
Conservator of Forests, Punjab,

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF THE
PUNJAB.

Dated LAHORE, the 23rd November 1908.

SIR,

I have the honour to submit the Progress Report on Arboriculture in the Punjab for the period 1905-06 to 1907-08. The arrangement of the subject-matter is the same as in the previous report.

2. The Swat River Canal Circle having been transferred to the North-West Frontier Province the figures for that Circle have been excluded from the opening balances of the present Report.

3. The report was due to Government on the 1st September 1908, but has been delayed on account of the late receipt of reports from some of the officers concerned and numerous errors and discrepancies in most of the reports which entailed a good deal of correspondence. A statement is attached giving the details of the dates of receipts of the completed district reports, etc., in my office.

I have the honour to be,

Sir,

Your most obedient servant,

C. P. FISHER,

Conservator of Forests, Punjab.

Statement showing dates of receipt of reports from the various districts and divisions and the dates of receipt of replies to the last objection issued from this office.

Name of Division.	Name of District or Division.	Date of receipt of report.	Date of receipt of reply to last objection issued to D. Cs. or E. Es.	REMARKS.
ARID DISTRICTS.		13-8-08	27-8-08	
Multan	Muzaffargarh District	13-8-08	27-8-08	
Do.	Multan do.	28-9-08	9-11-08	
Do.	D. G Khan do.	30-7-08	26-10-08	
Do.	Mianwali do.	25-9-08	9-10-08	
Lahore	Montgomery do.	5-8-08	21-9-08	
Multan	Jhang do.	10-7-08	8-11-08	
Do.	Do. Municipality	29-8-08	14-9-08	
Do.	Lyallpur District	24-8-08	16-9-08	
Rawalpindi	Shahpur do.	6-10-08	...	Reply of last letter has not been received. No forms received.
Do.	Do. Municipality	...	...	
Delhi	Hissar M. C. and District	10-8-08	8-10-08	
VERY DRY DISTRICTS.				
Jullundur	Ferozepore District	18-8-08	30-9-08	
Delhi	Rohtak do.	25-6-08	5-8-08	
Lahore	Lahore do.	29-8-08	28-9-08	
Do.	Do. Municipality	29-8-08	30-9-08	
Delhi	Karnal M. C. and District	9-7-08	23-7-08	
DRY DISTRICTS.				
Rawalpindi	Jhelum, M. C. and District	18-8-08	30-9-08	
Lahore	Gujranwala District	13-8-08	2-9-08	
Do.	Do. Municipality	13-8-08	...	
Delhi	Gurgaon District	31-7-08	20-8-08	
Lahore	Amritsar do.	30-7-08	18-9-08	
Do.	Do. Municipality	6-8-08	18-9-08	
Delhi	Delhi District	7-8-08	18-9-08	
Do.	Do. Municipality	12-9-08	6-10-08	
Jullundur	Jullundur District	18-8-08	12-9-08	
Do.	Ludhiana do.	20-7-08	18-9-08	
Rawalpindi	Rawalpindi District	2-9-08	...	Reply of last letter has not been received as yet.
Do.	Do. Municipality	2-9-08	...	
Do.	Attock District	6-10-08	17-10-08	
Do.	Do. Municipality	6-10-08	...	

Name of Division or Circle.	Name of District or Division.	Date of the receipt of report.	Date of the reply to the last objection issued.	REMARKS.
FOREST DISTRICTS.				
Rawalpindi	Gujrat District	18-8-08	31-10-08	Deputy Commissioner reports that the records have been destroyed in earthquake of 1905.
Do.	Do. Municipality	14-9-08	...	
Jullundur	Gurdaspur District	28-8-08	4-11-08	
Delhi	Ambala do.	31-7-08	16-10-08	
Lahore	Sialkot do.	22-7-08	28-8-08	
Do.	Do. Municipality	22-7-08	28-8-08	
Jullundur	Hoshiarpur District	18-6-08	...	
Delhi	Simla do.	10-8-08	6-10-08	
Jullundur	Kangra do.	14-8-08	4-9-08	
Do.	Do. Municipality	19-8-08	1-10-08	
CANAL DIVISIONS.				
Upper Bari Doab Canal (Circle) (Amritsar).	1st Division, Upper Bari Doab Canal ...	31-7-08	12-9-08	
	2nd do., do. ...	31-7-08	13-10-08	
	3rd do., do. ...	31-7-08	25-9-08	
	Upper Sutlej Division Inundation Canals ...	31-7-08	15-9-08	
	Central Workshop Division	22-6-08	...	
Lower Bari Doab Canal (Circle) (Lahore).	1st Division, Lower Bari Doab Canal ...	6-7-08	...	
	2nd do., do. ...	6-7-08	...	
	3rd do., do. ...	6-7-08	...	
	Sutlej Survey Division	19-6-08	...	
Derajat Circle (Multan)	Multan Canal Division	26-8-08	28-9-08	
	Dera Ghazi Khan Division Indus Canals ...	26-8-08	19-10-08	
Derajat Circle ...	Muzaffargarh Canals Division ...	26-8-08	26-9-08	
	Lower Sutlej Inundation Canals Division ...	8-8-08	16-10-08	
Western Jamna Canal Circle (Delhi).	Karnal Division, Western Jamna Canal ...	24-8-08	26-10-08	Only Statements Nos. II and IV received, other figures have been taken from narrative report.
	Delhi do., do. ...	24-8-08	21-9-08	
	Hissar do., do. ...	24-8-08	1-10-08	
Sirhind Canal Circle (Ambala).	Ludhiana Division, Sirhind Canal ...	3-7-08	15-8-08	
	Ferozepore do., do. ...	3-7-08	3-8-08	
	Patiala do., do. ...	3-7-08	...	
	Bhatinda do., do. ...	3-7-08	15-8-08	

Name of Division or Circle.	Name of District or Division.				Date of the receipt of report.	Date of the reply to the last objection issued.	REMARKS.
	CANAL DIVISIONS.						
Upper Chenab Canal Circle (Lahore).	1st Division, Upper Chenab Canal				25-7-08	...	Reply to last letter not been received as yet.
	2nd do.,	do.	...	...	25-7-08	3-9-08	
	3rd do.,	do.	...	...	25-7-08	17-9-08	
	4th do.,	do.	...	...	25-7-08	15-10-08	
	5th do.,	do.	...	...	25-7-08	13-8-08	
Lower Chenab Canal Circle (Lahore).	Khanki Division, Lower Chenab Canal				11-8-08	28-8-08	
	Lyallpur	do.,	do.	...	11-8-08	3-9-08	
	Lower Gugera	do.,	do.	...	11-8-08	31-8-08	
	Upper	do.	do.,	do.	11-8-08	10-9-08	
	Jhang	do.,	do.	...	11-8-08	22-8-08	
	Burala	do.,	do.	...	6-8-08	...	
Upper Jhelum Canal Circle (Jhelum).	2nd Division, Upper Jhelum Canal				4-7-08	15-7-08	
	3rd do.,	do.	...	...	4-7-08	14-7-08	
	4th do.,	do.	...	...	4-7-08	30-9-08	
	Railway and Quarries Division				13-8-08	...	
Lower Jhelum Canal Circle (Jhelum).	1st Division, Lower Jhelum Canal				20-7-08	10-9-08	
	2nd do.,	do.	...	...	20-7-08	5-9-08	
	3rd do.,	do.	...	...	20-7-08	...	
	Shahpur Inundation Canals Division				20-7-08	5-9-08	
	PROVINCIAL DIVISIONS.						
Rawalpindi	...	Rawalpindi	Division	...	7-9-08	6-10-08	Reply to last letter has not been received as yet.
Ambala	...	Simla	do.	...	15-8-08	21-10-08	
Do.	...	Kangra	do.	...	6-8-08	21-9-08	
Lahore	...	Lahore	do.	...	8-7-08	20-11-08	
Do.	...	Jullundur	do.	...	25-8-08	22-9-08	
Rawalpindi	...	Lyallpur	do.	...	22-8-08	...	
Do.	...	Gujranwala	do.	...	8-8-08	...	Ditto.
Do.	...	Shahpur	do.	...	24-7-08	17-8-08	
Lahore	...	Multan	do.	...	10-8-08	20-8-08	
Ambala	...	Ambala	do.	...	18-9-08	...	
Do. ^c	...	Delhi	do.	...	24-7-08	...	
Lahore	...	Ferozepore	do.	...	30-7-08	28-9-08	

PROGRESS REPORT

ON THE

ARBORICULTURE IN THE PANJAB

FOR THE TRIENNIAL PERIOD 1905-1906 TO 1907-1908.



A.—District Arboriculture.

District Boards and Municipalities.

(a).—General.

1. At the commencement of the period under review the length of avenues under the District Boards in the Punjab was 7,516·24 miles, and at its close 8,308·64 miles, showing a *net* increase of 792·40 miles. The province contains 13,537·14 miles of roads suitable for planting up, so a great deal still remains to be done. The progress and changes in each district are given in the appended Statement IV (a). The total additions, as given at the foot of that statement, include:—

	Miles.
Correction of previous figures	19·61
Planted during the period	1,148·24
Transferred from the Public Works Department ...	105·75
Other causes	20·60
Total	1,294·20
Add <i>inter</i> -district transfer	0·99
Total	1,295·19

The length of 1,148·24 miles planted during the period compares with a length of 598·63 miles planted in the previous triennium. The total deductions as shown in the statement are due to—

	Miles.
Corrections of figures	93·53
Failures	222·63
Felled	106·11
Transfer to Public Works Department	35·60
Other causes	43·93
Total	501·80
Add <i>inter</i> -district transfer	0·99
Total	502·79

It will be observed that out of the 1,148·24 miles planted during the period under report the failures amounted to 222·63 miles which is only 19·37 per cent. of the length planted, against 24·88 per cent. in the previous three years. A reference to the statement will show that with one exception the failures were considerably below the length planted; and similarly there is one district (Sialkot Municipality) in which no addition was made by planting and the failures amounted to 0·50 miles.

The districts which made a net addition (after deducting failures) of 25 miles to their avenues are Multan, Dera Ghazi Khan, Jhang, Lyallpur, Ferozepur, Lahore, Gujranwala, Gujrat, Sialkot and Kangra.

For the purpose of the arboricultural returns the districts are classed in groups as below, and the first four districts above named belong to the arid group, Ferozepur and Lahore to the very dry group, Gujranwala to the dry, and Gujrat, Sialkot and Kangra to the moist.

An examination on the above classifications of the results in the various groups of districts gives the following figures for the period :—

Arid districts. 657·38 miles were planted and 67·29 miles failed, which is 10·55 per cent. of the length planted ; and out of a total length of 4,723·27 miles of roads reported as suitable for planting, 2,051·08 miles were under avenues at the close of the period, while 2,672·19 miles remained unplanted.

In the very dry districts 94·39 miles were planted and 9 miles failed, that is, 9·53 per cent. ; and the length of avenues at the close of the period was 1,286·86 miles out of 2,268·85 miles of roads reported as suitable for avenues.

The *dry districts* show 132·33 miles as planted and 24·95 miles as “failed” which amounts to 18·85 per cent. of the length planted ; and 939·93 miles still remain unplanted out of a total length of 3,116·15 miles reported as suitable.

Fairly moist or “forest” districts show additions of 284·14 miles planted and failures of 121·39 miles or 42·72 per cent. ; and out of a total length of 3,428·87 miles of roads reported as suitable, there were 2,794·48 miles under avenues and 634·39 miles as yet unplanted. That the districts which are climatically most favourably situated for extension of their avenues should show the worst results calls for comment.

2. At the commencement of the triennial period the area under groves amounted to 4,835·57 acres and at its close to 4,823·31 acres, showing a net decrease of 12·26 acres. Statement III (a) attached to this report shows the progress made and changes that have occurred in each district.

The total additions, as given at the foot of that statement, include :—

	* Acres.
Correction of figures	0·50
Planted during the period	33·30
Transfers from other heads	7·40
Transfers from other management	5·68
Other causes	31·30
Total as per statement	78·18

The total deductions, as shown in the statement, are due to :—

	Acres.
Correction of figures	0·73
Failures	14·78
Transfers to other heads	42·13
Transfers to other management	3·50
Other causes	29·30
Total	90·44

For the “correction of figures” the Multan district is responsible as it shows 0·50 of an acre as addition and 0·73 of an acre as deduction under this head.

The failures amount to 14·78 acres against 29·41 acres in the previous period. 3·50 acres transferred to other management include 0·63 of an acre transferred to the Public Works Department, 1·50 acres to a private person and 1·00 acre to the Lyallpur Municipality. The reasons for the deduction of 29·30 acres under “other causes” are given at the foot of the statement.

33·30 acres of groves were planted and 14·78 acres failed during the period under report against 43·17 and 29·41 acres, respectively, during the period of the previous report, the percentage of failures being 44·38 per cent. against 61 per cent. during the previous period.

The percentage of failures in the different groups of districts during the period under report was :—

	Per cent.
Arid districts	5·54
The very dry districts	23·81
Dry districts	34·28
The fairly moist or forest districts	800·00

The last figure is misleading, for nothing was planted and 8 acres failed, thus giving 800 per cent. failure, according to the calculation adopted.

No groves were planted in the moist districts and even in other districts the area brought under groves was very small.

3. 1,896·69 acres were under plantations at the beginning of the period under report and 1,927·14 acres at the close, the net increase being 30·45 acres. The details are given in Statement II (a).

The additions shown in that statement include :—

	Acres.
Successfully sown or planted	62·66
Transferred from nurseries	5·50
Total	68·16

The deductions were :—

Failures	23·91
Transferred to other management	4·00
Other causes	9·80
Total	37·71

The failures were 23·91 acres out of 62·66 acres planted or 38·16 per cent. as compared with 61 per cent. in the previous triennium ; the area transferred to other management consisted of 4 acres made over to the Gurdaspur Municipality.

4. At the commencement of the period under report the area under nurseries amounted to 262·17 acres, while at its close it was 275·45 acres. The details are given in Statement I (a).

The additions include :—

	Acres.
Correction of figures	4·51
Extension of nurseries	89·32
Other causes	5·24
Total	99·07

The deductions were :—

	Acres.
Correction of figures	1·70
Failures	56·10
Transfers to groves, etc.	13·50
Other causes	13·99
Total	85·29

A new garden called Nikanawan, 3·50 acres in area, was started in the Shahpur district. It is irrigated from the canal, and Rs. 200 worth of fruit trees were obtained from the Agri-Horticultural Gardens at Lahore to stock the garden.

The Victoria Jubilee Memorial Hall with its ornamental garden and tennis court, measuring 2·50 acres, was transferred to the District Board, Karnal, in October 1904. It has now 70 ornamental trees and a vinery.

The gardens at Gujranwala and Amritsar are in a flourishing condition.

There are 4 gardens in the Jullundur district and 2 in the Ludhiana, but they are not in very good condition. Proposals are being made to irrigate the Ludhiana gardens from the Sirhind Canal.

A new garden has been started in the Kangra district for which 200 fruit trees were obtained from the Agri-Horticultural Gardens at Lahore.

One hundred Malta orange and 50 common orange plants were obtained from the Agri-Horticultural Gardens at Lahore and planted in the gardens at Chhatar and Gujar Khan, Rawalpindi district. The former garden contains only "Loquat" trees, but is famous all over the province for the excellence of its fruit.

(b).—*Details of work done.*

ARID DISTRICTS.

5. *Muzaffargarh*.—The length of avenues was increased by 26·29 miles during the period under report, and 17,489 trees were planted in gaps. The planting of roadside avenues has received constant attention from the District Board authorities, but it is now very difficult to find roads where tree planting may be carried out with a fair prospect of success, because most of the remaining roads run through waterless, sandy tracts or through land impregnated with "reh". No permanent nurseries were established or maintained. Temporary nurseries were, however, opened on private land near wells with the consent of the owners and sown with shisham, kikar and siris. Small nurseries were also maintained in every District Board garden and in the compounds of schools and rest-houses under the control of the District Board. The arrangement was inexpensive and produced plants sufficient for all requirements.

Multan.—The length of avenues at the commencement of the period was 323·12 miles and at its close 256·64 miles, the decrease being 66·48 miles.

As mentioned in the previous report, a bye-law has been made and confirmed by the Punjab Government by which camel drivers are required to muzzle their camels while using the District Board roads. It has also been arranged to grant "sanads" to persons assisting in arboricultural operations.

Dera Ghazi Khan.—47·00 miles of avenues were successfully planted during the period. But owing to the scarcity of water in almost all parts of the district, successful avenue planting is very uphill work.

Mianwali.—The avenues increased from 51·55 miles at the beginning of the period to 61·55 miles at its close, the net increase is, however, only 6 miles as the addition of 4 miles is due to the correction of figures. Small nurseries are maintained in each tahsil where plants of various tree species are raised. Under plantations the increase has occurred in the Dilkusha garden at Bhakkar while 6 acres of land have been purchased at Leiah and are being converted into a garden. Rupees 6,200 were granted by Government for the public gardens and Rs. 5,575-10-8 for arboriculture.

Montgomery.—10·50 miles of avenues were planted in the Gugera and Dipalpur tahsils, but nothing was done in the Montgomery and Pakpattan tahsils owing to the scarcity of water. Small nurseries, with an aggregate area of 0·7 acres, were started in different villages. Government have made an annual grant of Rs. 4,000 for a period of 5 years commencing with 1906-07 for arboriculture.

Jhang.—At the commencement of 3 years' period there were 54·50 miles of avenues, 78·00 miles were planted during the period and 6·85 miles were transferred from the Public Works Department, but 14·85 miles failed, so that the triennium closed with a balance of 124·50 miles of avenues. 9·4 acres of nurseries were made at various centres, out of these 0·25 acre of the Jhang Civil Station nursery failed. In the canal colonies nurseries are maintained by villagers, on which the District Board can draw for their requirements. There are no plantations and no additions were made to the groves. Six "sanads" were granted to people who had taken interest in arboriculture.

Lyallpur.—There were 229·25 miles of avenues at the beginning of the period under report, 358·25 miles were planted during this period, all of which succeeded, thus the total length of the avenues successfully planted at the close of the period was 587·50 miles. The Deputy Commissioner reports that in spite of many difficulties and drawbacks extensive progress has been made. Grants are made to Lambardars, for maintaining nurseries, under special rules sanctioned by Government, and none are therefore maintained by the District Board. There are no plantations, but the groves at Newan, Thikriwala, Dijkot and Khurrianwala are in a flourishing condition. The example of this district in successfully getting the co-operation of the people in the extension of its arboriculture is worthy of special mention.

Shahpur.—During the period 34·68 miles of avenues were planted and 9·00 miles were transferred from the Public Works Department, while 15·54 miles failed, 40·25 miles were felled and 20·50 miles were washed away by river action, the net decrease from the opening balance being 32·61 acres. A garden, 3·50

acres in extent was started during the period, and Rs. 200 worth of fruit trees were obtained from the Agri-Horticultural Gardens at Lahore. The garden is irrigated by canal water. A nursery 2.25 acres in extent was sown and maintained.

Hissar.—The mileage under avenues was increased by 18 miles, where the majority of trees are doing well; 314.87 acres were under groves at the end of the period showing an increase of 6.30 acres. A plan of operations for 5 years (1905 to 1909) was sanctioned by the District Board in March 1905. Arboriculture has to be carried out under great difficulties in this district owing to the scarce rainfall during the monsoon which necessitates the artificial irrigation of young plants. Katcha and pacca brick fences have been built around young trees to protect them from goats and other animals. The Government have made an annual grant of Rs. 3,500 for 5 years (1905 to 1909) for arboriculture in the district, and this will be utilised in planting trees along roads.

VERY DRY DISTRICTS.

Ferozepore.—25 miles of new avenues were planted during the period under report, the total number of miles of successfully planted avenues at the close of the period being 568.75. Four acres of plantations were planted and 4 acres failed, so that there was no increase in the area of plantations during the period under report. The net addition to groves amounted to 8 acres, bringing up the total area to 393.54 acres at the close of the period.

Rohtak.—During the period 2 miles of avenues were planted and 1.73 miles were transferred to the Ferozepore Provincial Division, Public Works Department, so that the net addition was only 0.27 mile. In all 6,825 trees were planted, but 2,369 died. 1.50 acres of new nurseries were started and 0.04 of an acre was received from the Public Works Department, the total area under nurseries at the close of the period being 4.15 acres. Plants of *uim*, *shisham*, *siris*, *bakain*, mulberry, etc., were raised in these nurseries which are irrigated either from canals or wells. 0.50 of an acre was added to groves, and the same area failed owing to drought, so that there was no increase to the area under groves. A programme for arboriculture operations has been sanctioned by the Commissioner.

Lahore.—53.5 miles of new avenues were planted, out of which 9 miles failed and 22.00 miles were transferred to the Public Works Department; the total length under the District Board was 287.44 miles at the close of the year. No nurseries were made; but sites are being selected all over the district. The Shalamar and Shahdara gardens were transferred from the management of the District Board to that of Government with effect from 1906-07 and 1907-08, respectively. Owing to the generous Government contribution of Rs. 6,000 per annum the District Board has been able to appoint a Darogha and 4 Jemandars to supervise the arboriculture of the district. It is premature yet to say how the new arrangement will work, but it has been decided to concentrate the operations on short lengths of roads at one time as this arrangement will undoubtedly give the best results. The question of providing young trees with proper tree-guards was also taken up in the vicinity of Lahore.

Karnal.—The total length of avenues at the commencement of the period was 128.59 miles, 10.00 miles were planted and 17.50 were received from the Public Works Department during the period, so that the total length at the close of the period was 156.09 miles; also gaps in the existing avenues were filled up by planting 3,180 trees. The trees which died or were blown down by wind amounted to 3,180. To protect young trees thorn or mud fences were erected around them, while in the Civil Station brick lattice fencing was built on the Mall around such trees as needed protection. The trees are watered by means of water lifted from wells, bhishtis and pakhsals being employed for this purpose. During the period no new nurseries were made; those at Panipat and Thanesar (measuring 0.45 acre) failed and were consequently abandoned. The central nursery at Karnal has been maintained and now supplies plants for the district roads. As far as possible arboriculture operations have been carried out according to the 5 years' sanctioned programme. The District Board sent its Arboriculture Inspector to the Dehra Dun Forest College for 4 months' training, and it is hoped that with the practical knowledge gained by him arboricultural operations will make great progress in this district in the future.

DEY DISTRICTS.

Jhelum.—6 miles of new avenues were planted and 2·54 miles were taken over from the Public Works Department, while 1·98 miles failed and 4·02 miles were felled, so that the net increase to the length of avenues was 2·54 miles. The area under nurseries fell from 13·94 acres to 0·15 acre or a decrease of 13·79 acres which was chiefly due to drought and swarms of locusts which visited the district and ate up young plants. There are no plantations in this district; and there was no addition to the area under groves. The District Board obtained from the Forest Department the services of a Forest Ranger on Rs. 100 per mensem under whom were placed 3 Daroghas on Rs. 20 with Rs. 10 as travelling allowance. The experiment was not, however, successful, and the services of the Forest Ranger were dispensed with in 1907-08 and now the work has been entrusted to the District Engineer.

Gujranwala.—The length of roads suitable for avenues increased by 15 miles during the period in consequence of the inclusion of certain new roads. 51·25 miles of new avenues were planted out of which, however, 4·50 miles failed, and the total length of avenues at the close of the period amounted to 251·01 miles. In addition to this a large number of trees were utilized for filling up gaps in the existing avenues. The trees transplanted consisted chiefly of *shisham*, *kikar* and *siris*. 8·80 acres of new nurseries were sown during the period under report; out of these 0·35 acres failed in consequence of frost, and 2·62 acres were abandoned owing to the trees having been used in avenue planting. The zamindars in the Khanqah Dogran Tahsil maintain their own private nurseries whence any number of plants can be obtained for roadside planting without any difficulty. The Gujranwala and Wazirabad tahsils are still backward in the matter of nurseries, but steps are being taken to remedy this defect. No additions were made to plantations and there are no groves in the district.

The District Board maintains 7 gardens at various places in the district, of these 2 (one at the Saddar Station, Gujranwala, and the other at Khanqah Dogran) are the largest. Several varieties of fruit trees are growing in these gardens, but they are mainly famous for their Malta orange trees. 100 new Malta orange trees supplied by the Director of Agriculture, Punjab, in 1905, are thriving and now bear fruit. This fruit is the chief source of income of these gardens. The Municipal Committees of Gujranwala, Wazirabad and Ramnaga also maintain small fruit gardens. These are, however, more or less ornamental and their income does not cover the cost of their maintenance. For the purposes of supervision of arboriculture the district has been divided into 2 circles, each circle being in charge of a Darogha on Rs. 25 with Rs. 15 as horse allowance. Under these there are 5 jamadars on Rs. 10 per mensem, one in charge of each tahsil and the fifth man is a temporary jamadar employed during 1907-08 for the Sangla-Beranwala road newly planted with trees. One of the Daroghas referred to above has been trained at the Dehra Dun Forest College at the expense of the District Board. The Government have made an annual grant of Rs. 5,000 for arboriculture with effect from 1906-07.

Gurgaon.—No new avenues were planted, but 16,214 trees were used in filling up gaps. A very much larger number of trees would have been planted along roads, but in consequence of the sudden and early cessation of the monsoon in August 1907 planting operations had to be stopped.

The old nurseries having an area of 0·59 acre were abandoned and 5 new ones with an aggregate area of 1·66 acres were laid out. One of these nurseries, which is at Palwal, has not proved a success. It will, therefore, be abandoned. Trees of *shisham*, *nim*, *pipal*, mango, *kikar*, *jaman* and *gular* are raised in these nurseries. There was no alteration in the area of plantations or groves.

The 3 years' scheme for arboricultural operations sanctioned by the Commissioner in April 1905 has been carried out during the triennial period under report. The Government have made a grant of Rs. 4,900 per annum for arboriculture in the district.

Amritsar.—32·34 miles of new avenues were planted, out of these, however, 13·70 miles failed and dead trees were felled on 6·74 miles, so that the net addition to the avenues was 11·90 miles, the total length at the close of the period being 210·00 miles; 8,040 trees were planted in gaps, but out of these 3,654 trees died. The area of nurseries at the commencement of the period was 23·70

acres, and 1 acre was laid out as a nursery during the period, while 0·37 of an acre failed, and 2·16 acres were abandoned in consequence of the plants having been used in avenue planting. The trees raised in the nurseries were *shisham*, mango, *tun*, *jaman*, *kikar*, *farash*, *majnu*, etc. There was no extension of the area of plantations; but 4·50 acres were added to the area of groves; out of these, however, 3·60 acres failed, so that the actual area of groves at the close of the period amounted to 48·98 acres. The Rambagh garden continues to maintain its reputation as the most attractive and ornamental garden in the district. The income from it is steadily on the increase, being Rs. 12,296 as compared with Rs. 11,860 during the previous triennial period. 3,100 fruit trees of various species were planted and 1,890 trees were sold. 3,488 animals were impounded under the Cattle Trespass Act for injuring young plants on roadsides.

Delhi.—11·89 miles of new avenues were planted and 18·00 miles were received from the Public Works Department, while 4·77 miles failed, 0·80 miles was felled over, 6·37 miles were transferred to the Public Works Department and 7·31 miles were written off for other causes, the total length of avenues at the close of the period being 156·99 miles. A plan of operations was prepared which received the Conservator's approval in February 1905. For this purpose 3 roads were selected, one in each tahsil. During 1907-08 no planting work could be carried out as the year was exceptionally unfavourable and a very large percentage of trees died from drought. But the gaps have now been filled up successfully. During 1906-07 two thousand bamboo tree-guards were made by the District Board at a cost of Rs. 3,000, but many of these were damaged by white ants; they are now being repaired. In 1907-08, 700 iron tree-guards were obtained at a cost of Rs. 2,000 and some more are being made. It is hoped that the latter will last well and prove their utility, for there is little doubt that a properly made iron tree-guard is the only kind that prevents injury to young trees from most animals, while giving a sufficiency of light to the tree. 1·07 acres were added to the area of nurseries and 0·55 of an acre was abandoned, the net increase being 0·52 of an acre. 2·91 acres of plantations were successfully planted, while 1·41 acres failed for want of water and 1·80 were restored to zamindars. Endeavours are being made to plant trees on the existing "bands" as well as on those constructed in 1907-08. No addition was made to the groves, while an area of 0·73 acre was written off in consequence of the trees having died from drought, and for other reasons.

Delhi Municipality.—During the period under report no extensions of note were made to the avenues. The brick guards which were erected around the trees proved useless. In fact they injured the health of the young trees they enclosed. They have, therefore, been replaced by iron guards, and already an improvement has taken place in the condition of the young trees. In the established avenues trees will be thinned where necessary. 5·00 miles of avenues have been transferred to the Public Works Department. 1·70 acres of nurseries were sown, out of which 1·00 acre failed, leaving a balance of 0·70 of an acre at the close of the period.

Jullundur.—There was no addition to the length of avenues during the period under review, nor did any increase take place in the areas of the nurseries and plantations; a plot of 20 acres was, however, purchased as a site for the horse-show and cattle fair and added to the area under groves. A retired Subedar has been appointed Inspector of Arboriculture on Rs. 100 per mensem, with effect from 1st June 1907, but it is too early as yet to say whether this appointment will prove a success or not.

Ludhiana.—During the period under report 6 miles were added to the length of avenues. The trees are doing well, but are not strong enough to exist without the aid of irrigation. 11,617 trees were planted to replace those which had died or had been blown over by storms. 0·13 of an acre was added to the area of nurseries, while 0·84 was transferred to groves. There are no plantations, but 0·84 of an acre was added to the area of groves, while 22·42 acres were transferred to the North-Western Railway. The plan of operations sanctioned for three years was carried out. The Government made an annual grant of Rs. 3,000 for arboriculture. It was, therefore, possible to increase the establishment employed on this work and to increase the pay of the existing staff.

Rawalpindi.—No addition was made to the length of avenues, but 32,000 trees were planted in gaps, out of which 12,104 survived. A programme of arboricultural work was prepared and followed. The work was, however, carried out through the Tahsildars, and as they were frequently transferred, no substantial progress was made in 1905-06. But since then the work has been placed in charge of the District Engineer, and better results are expected in the future.

4·03 acres were laid out as nurseries and sown with *shisham*, *darek*, *tun*, *tut* and mangoes, the last-named species being sown in the nurseries in the Kahuta tahsil. The plants in most of the nurseries are doing well, but some nurseries will have to be abandoned as their results are not very satisfactory. There are no plantations and no addition was made to the area of groves.

Attock.—23·40 miles were added to the length of avenues during the period under report. The young trees were largely destroyed by locusts in 1906-07 and had to be replaced by new ones which caused a great reduction in the outturn of the newly planted avenues. 5·07 acres were added to the area of nurseries, while 1·28 acres were written off as failures, the net increase being 3·79 acres. The plants raised in the nurseries were damaged by locusts in 1906 and 1907, but the result on the whole has been satisfactory. The plants consisted of *shisham*, *dharek*, *siris*, *beri* and poplars. There was no area under plantations at the commencement of the period under report, but 5·50 acres were brought under plantations during the period. 6 acres were added to the area of groves, the total area at the close of the period being 31·65 acres.

FAIRLY MOIST DISTRICTS.

Gujrat.—117·4 miles of avenues were planted during the period under report, out of which 44·26 miles failed, while 3·34 miles were felled. The failures were due to drought and frost and to the destruction of the roots of the plants by rats. *Kikar* seedlings are now very largely planted as this species is more suited to the district than *shisham*, but large failures of *kikar* also occurred which were almost entirely due to the destruction by rats of the roots of young plants and of the seed. 47·21 acres of new nurseries were sown, out of which 37·01 acres failed owing to the causes mentioned above, while 0·20 of an acre was transferred to groves and 1·53 acres were written off in consequence of the plants raised in them having been used in avenue planting. There were no plantations while the area of groves was reduced by 47·93 acres, 5·80 acres having failed and 42·13 acres having been transferred to other heads. The Government have made a grant of Rs. 5,000 per annum which has enabled the District Board to push on the work with the result that the 5 years' programme of operations has been exceeded. Greater care is necessary in the district to reduce the percentage of failure which is abnormally high.

Gurdaspur.—41·82 miles of new avenues were planted, while 19·47 miles failed and 8·52 miles were felled over. The failures were due partly to scanty rainfall and partly to the damage done by animals in spite of the fact that young trees are protected by "thor" fencing. The trees planted consisted chiefly of *shisham* and mango. 0·32 of an acre was added to the area of the nurseries, while 0·01 of an acre was written off on account of failures. The additions proposed in the plan of operations could not be made owing to the difficulty in acquiring suitable sites. No addition was made to the area of plantations, while 4·00 acres of the existing area were transferred to the Municipal Committee of Batala, 5·00 acres were added to the station garden and 3 acres were transferred to the Public Works Department for the erection of a house for the Settlement Officer. No alteration took place in the area of groves.

Ambala.—3·35 miles of avenues were planted, 18·12 were received from the Public Works Department by transfer and 1·56 miles were added by correction of previous years' figures, while 8·83 miles were felled owing to the trees having been damaged by storms and 0·50 of an acre was transferred to the Public Works Department, the net length of avenues at the close of the period being 142·25 miles. The area under nurseries at the beginning of the triennial period was 0·78 of an acre; 2·29 acres were sown during the period and 0·99 of an acre was received from the Public Works Department, while 1·31 acres failed and 0·25 of an acre was abandoned. There was no area under plantations, while 0·68 of an acre of groves was received from the Public Works Department, and

0·63 of an acre made over to that Department, the total area under groves at the close of the period being 32·48 acres. The appointment of an arboriculture darogha, who was sent to Lyallpur by the District Board for training, has had satisfactory results as the malis are now properly supervised. A programme of arboricultural operations for five years, 1902-03 to 1906-07, was sanctioned in 1904 and was wholly acted up to. A new programme for the next three years was prepared and submitted for sanction in December 1907, but was received back for supplying some further information and is now being re-submitted.

Sialkot.—83·00 miles of new avenues were planted, while 36·50 miles failed through drought, 20·50 miles had to be felled in consequence of the trees having been damaged or uprooted by storms. 0·99 of a mile was transferred to the Sialkot Municipality. Sissu was the chief species planted, but *kikar*, mango, *jaman*, etc., have also been planted. The grant made by the Government has enabled the District Board to make great headway in avenue planting, but owing to drought failures have been considerable. In this district no more concentrated operations would result in the very high percentage of failure in avenue planting being reduced. 6·56 acres were added to the area of nurseries, while 5·50 acres were transferred from this head to that of plantations, the total area under nurseries at the close of the period being 9·93 acres. There was no area under plantations at the commencement of the period, but 5·50 acres were transferred to this head from that of nurseries, while 0·50 of an acre had to be written off owing to failures, and the total area under plantations at the close of the period was 5·00 acres. The area under groves rose from 23·39 acres to 25·89 acres in consequence of the transfer of over-grown nurseries. It is again reported that goat-herds do much damage to trees by lopping off young branches to feed their flocks, and several persons have been prosecuted, but the evil has not been suppressed. Arboricultural Superintendents have been appointed and their appointment has already been attended with good results.

Hoshiarpur.—12·50 miles were added to the length of avenues, while 0·50 of a mile was lost through failures, and the total mileage under avenues at the close of the period was 506·75. In addition to this, gaps in existing avenues have been filled up. 2·11 acres, which were under nurseries, were transferred to groves as the trees in them did not make good progress; 2·73 acres of new nurseries were sown, out of which 0·13 of an acre failed. There was no area under plantations and the area under groves received an addition of 2·11 acres by transfer from the area under nurseries, while 1·00 acre of the groves had to be written off owing to failures. For the purposes of supervision the whole district has been divided into two circles, each being in charge of an arboriculture darogha. Both of these men have been trained at the Dehra Dun Forest College. In order to protect the young trees from the attacks of animals they have been surrounded with cactus or thorn fences which are maintained as long as the trees are in danger from browsing animals.

Simla.—The work consisted of the maintenance of the Mahasu orchards and nurseries which supply annually 5,000 fruit trees to the Director of Agriculture, Punjab, for distribution. The old trees in the orchards are replaced by new ones, but this work is very slow as the existing establishment can, with difficulty, raise more plants than are required for distribution. Peach trees are reported to be dying of old age.

Last year hailstones so seriously damaged a large number of trees that they are not expected to recover.

Kangra.—During the period under report 45·42 miles of new avenues were planted, out of which 19·96 miles failed. An addition of 4·51 acres was made to the area of nurseries, but this increase was due to the correction of figures and not to any new nurseries. No increase occurred in the area under plantations or groves. The triennial programme of arboricultural operations for the years 1904-05 to 1906-07 has been completed and a fresh programme for three years (1907-08 to 1909-10) has been drawn up and submitted to Conservator for approval. The Government have made a grant of Rs. 2,500 per annum for five years for arboricultural operations.

200 fruit trees of various kinds obtained from the Agri-Horticultural Gardens at Lahore for the new garden at Kangra. It is, however, too soon as yet to judge of the success or failure of this venture.

(c).—*Financial Results.*

6. The revenue from arboriculture during the triennial period under report was Rs. 6,89,538, or Rs. 55,394 more than in the previous period, *vide* Statement V (a), and the expenditure as per Statement VI (a) was Rs. 9,56,346 or Rs. 2,33,281 more than in the preceding period; there was for the period under report a deficit of Rs. 3,16,808 as compared with a deficit of Rs. 1,38,921 for the preceding period. The highest incomes, *i.e.*, incomes exceeding Rs. 30,000 were realized in the Shahpur, Gujrat, Gurdaspur, Sialkot, Hoshiarpur Districts and the Amritsar and Delhi Municipalities. The highest expenditures, *i.e.*, those over Rs. 30,000 were incurred in the Multan, Mianwali, Jhang, Lyallpur, Shahpur, Hissar, Ferozepore, Gujranwala, Gujrat and Sialkot Districts and the Lahore, Amritsar and Delhi Municipalities.

Omitting Municipalities there are 29 District Boards, of which 9 (Shahpur, Jhelum, Rawalpindi, Attock, Gujrat, Gurdaspur, Sialkot, Hoshiarpur and Simla) worked at a profit, remaining 20 working at a deficit.

The Kangra and Dharmasala Municipalities have not furnished any figures in consequence of their records having been destroyed in the last earthquake, the opening balances have therefore been taken from the previous report.

The Shahpur Municipality did not furnish any figures about the work done, and in this case also the opening figures have been taken from the previous report.

The deficit for the triennium under report is a large one and more attention is required that money is not needlessly spent on unsuccessful planting and sowing or else in providing for better supervision by the appointment of highly paid subordinates. At the same time it must be borne in mind that expenditure on arboriculture only produces results after a long lapse of years and even then partly in indirect benefits.

B.—Canal Arboriculture.

7. The figures for the Swat River Canal Circle were included in the returns for the previous period. This circle has now been transferred to the North-West Frontier Province. Hence the closing balance of this circle (215·91 miles) which was included in the closing balance of the return for the previous period has been excluded from the opening balance of the present return. At the commencement of the period under review there were therefore 4,274·86 miles of avenues under the Irrigation Department in the Punjab out of a total length of 8,773·14 miles of road suitable for tree planting; 732·38 miles were added during the period, the total length of avenues at its close being 5,007·24 miles. The total additions, as given in the appended Statement No. IV (b) were—

	Miles.
Correction of figures	324·09
Planted during the period	1,443·16
Transfers to other departments	11·00
Other causes	3·50
Total	1,781·75
Add inter-divisional transfers	289·38
Total as per statement	2,071·13

This length of 1,443·16 miles planted compares favourably with 1,007·15 miles planted during the previous period. The divisions which show the best records of planting work are the Lower Jhelum Canal, 2nd Division, with a net length of 254 miles, Burala Division, with 227, Lower Jhelum Canal, 3rd Division, with 139, Upper Gugera Division, Lower Chenab Canal, with 88 and Jhang Division, with 73 miles.

The total deductions as shown in the statement are due to—

	Miles.
Correction of figures	367.47
Failures	537.05
Felled	99.98
Transfers to other departments ...	11.50
Other causes	33.37
Total ...	1,049.37
Add inter-divisional transfers ...	289.38
Total as per statement ...	1,338.75

The "failures" amounted to 537.05 miles against 358.64 miles in the previous period. The percentage of failures was 37.21, while in the previous period it was 35.60. The failures are still very high and mean a great loss of money annually.

The deduction for the correction of figures is chiefly due to a mistake made by the divisions in the Western Jumna Canal Circle when preparing the returns for the previous period by which a large number of channels now abandoned and a large number of distributaries quite unsuitable for tree planting were included in the report. These have now been excluded.

Groves.

8. There are no groves in the charge of the Irrigation Department.

9. During the period under report 206.10 acres of plantations were transferred to the North-West Frontier Province with the Swat River Canal

Circle. And a mistake was evidently made in this office when compiling the return by which 0.72 of an acre was added too much to the grand total. These two figures—206.10 and 0.72—have now been excluded from the closing balance of the previous period. Thus the period under review opened with 22,517.59 acres of plantations and closed with 24,254.36 acres, the net increase being 1,736.77 acres. The details are given in Statement II (b). The additions as shown in that statement were:—

	Acres.
Correction of figures	1,048.08
Sown or planted	3,067.80
Transfers from nurseries	58.73
Other causes	544.44
Total ...	4,719.05
Add inter-divisional transfers...	813.66
Total ...	5,532.71

The above figures of 3,067.80 acres planted compare favourably with 2,707.61 acres planted in the previous period.

The exclusions were as follows:—

	Acres.
Correction of figures	1,365.99
Failures	783.80
Transfers to other heads	26.96
Other causes	805.53
Total ...	2,982.28
Add inter-divisional transfers ...	813.66
Total ...	3,795.94

In most cases the reasons for failures and for loss from other causes are mentioned at the foot of the statement. 783.80 acres failed against 548.25 in the previous period. The percentage of failures was 25.54 while in the previous period it was 20.25.

The Western Jumna Canal Circle had modified its figures under this head also for reasons similar to those given in the preceding paragraph.

10. The area of nurseries (0.75 acre) in the Swat River Canal Circle has also been excluded from these returns for the reasons already stated.

The area under nurseries at the commencement of the period was 35.78 acres and at its close 41.70 acres, showing a net increase of 5.92 acres. 76.35 acres of new nurseries were sown and other additions amounted to 4.15 acres, while 5.24 acres failed, 58.73 acres were transferred to plantations and 10.61 acres had to be written off for other reasons as will be seen from Statement I (b).

11. The income during the period under review amounted to Rs. 3,91,189 and expenditure to Rs. 7,09,445, showing a deficit of Rs. 3,18,256 as compared with a revenue of Rs. 3,16,901, expenditure of Rs. 6,25,816 and a deficit of Rs. 3,08,915 in the previous period. The revenue of each of the 8 divisions—1st and 2nd Divisions, Upper Bari Doab Canal, Muzaffargarh Canals Division, Delhi and Hissar Divisions, Western Jumna Canal and Ferozepore, Ludhiana and Patiala Divisions of the Sirhind Canal—exceeded Rs. 20,000. Expenditure exceeding Rs. 30,000 was incurred in the 1st Division, Upper Bari Doab Canal, Upper Sutlej Inundation Canals Division, Khanki, Lyallpur, Upper Gugera, Lower Gugera, Jhang and Burala Divisions of the Lower Chenab Canal, and 2nd and 3rd Divisions of the Lower Jhelum Canal.

C.—Arboriculture in Provincial Divisions. (Public Works Department).

12. A net increase of 142.41 miles took place in the length of avenues which at the close of the period amounted to 1,046.64 miles out of 1,356.29 miles considered suitable for avenues. The changes in each Provincial Division are shown in the appended Statement IV (c); the total additions as given at the foot of that statement are as follows:—

						Miles.
Correction of figures	...	...	...	...	...	207.00
Planted during the period	...	...	...	...	...	145.62
Transfers from other Departments	...	...	...	...	...	35.60
Total	...	...	...	...	...	388.22
Add inter-divisional transfers	...	...	...	...	...	77.40
Total	...	...	...	...	...	465.62

The length of 145.62 miles planted is double the length planted in the preceding period.

The total deductions were:—

						Miles.
Correction of figures	...	...	...	...	...	77.17
Failures	...	...	...	...	...	28.04
Felled	...	...	...	...	...	3.31
Transfers to other Departments	...	...	...	...	...	135.87
Other causes	...	...	...	...	...	1.42
Total	...	...	...	...	...	245.81
Add inter-divisional transfers	...	...	...	...	...	77.40
Total	...	...	...	...	...	323.21

The above figure of 28.04 miles of failures is more than twice the length which failed in the previous period; the Simla Division reports the largest length which failed, the cause being landslips. The percentage of failures was 19.25 against 17.16 during the previous period.

13. 502.22 acres were under groves at the commencement of the period and 523.50 acres at the close, the net increase being 21.28 acres as will be seen from Statement III (c).

14. During the period there was a slight increase of 2.99 acres in the area under plantations and the total area under this head at the close of the period was 88.08 acres.

15. The area under nurseries was 42.60 acres at the beginning of the period which rose to 45.08 acres at the close, so that there was an increase of only 2.48 acres.

16. The revenue of the period under report amounted to Rs. 95,804 and the expenditure to Rs. 74,677 thus showing a surplus of Rs. 21,127. The Jullundur, Gujranwala, Delhi and Ferozepore Divisions showed a profit while the other Divisions worked at a loss.

Statement V (c) and VI (c) show the income realized and the expenditure incurred in each Division.

General Remarks.

17. The following table exhibits the extensions by planting and the failures in avenues, groves and plantations under the management of the District Boards, the Irrigation Department and the Provincial Divisions and compares them with those of the previous period :—

	1905-06 to 1907-08.		1902-03 to 1904-05.	
	Planted.	Failed.	Planted.	Failed.
Avenues (miles)	2,737.02	787.72	1,678.62	520.07
Groves (acres)	34.49	15.28	48.32	30.81
Plantations (acres)	3,130.46	807.73	2,723.42	558.98

The results of this triennial period compare very favourably with those of the previous period on the whole.

The ratio of failures to extensions during the period under report is as follows :—

Avenues.—28.78 per cent. as compared with 30.98 per cent. for the previous period.

Groves.—44.30 per cent. as compared with 63.75 per cent. for the previous period.

Plantations.—25.80 per cent. as compared with 20.53 per cent. for the previous period.

The above calculation shows an improvement in the method of planting operations except in the case of plantations. It appears from the above that greater care is being taken in the planting of trees than formerly. Still the fact cannot be overlooked that the percentage of failures is still very high and that one-fourth of the expenditure yearly should be so much wasted public money must admit of a remedy. The remedy lies in closer supervision of the subordinate staff who in turn should be selected with a view of improving the arboricultural methods in vogue and should possess the necessary knowledge.

18. As mentioned in the last report several districts have complained of the damage done to trees by goat-herds who lop trees for feeding their animals and by camels. In the Multan District where the damage by camels is very considerable a bye-law has been passed requiring the muzzling of all camels passing along roads. This is a good solution and combined with the adoption of efficient tree-guards much damage under this head could be avoided.

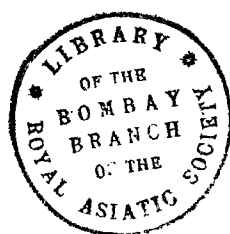
19. The revenue from all sources was Rs. 11,26,531 and the total expenditure amounted to Rs. 17,40,468 showing a deficit of Rs. 6,13,937 for the three years' period under report or an average of Rs. 2,04,646 per year while in the previous period the revenue was Rs. 9,69,992, expenditure Rs. 14,01,424 and the deficit Rs. 4,31,432 thus the revenue, expenditure and deficit of the period under report exceeded those of the previous period by Rs. 1,56,539, Rs. 3,39,044 and Rs. 1,82,505, respectively.

The deficit of Rs. 6,13,937 is made up of:—

	Rs.
District Boards, deficit	3,16,808
Irrigation Department, deficit	3,18,256
Provincial Divisions, surplus	21,127

More money is being spent yearly on arboricultural works in the province and with improved methods of treatment, and better and more highly trained supervision, the large item of unprofitable expenditure could probably be reduced.

STATEMENTS.



STATEMENT No. I (a).

PROGRESS STATEMENT OF NURSERIES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1905-06 to 1907-08.

1	2	3						4						5	6
DISTRICT OR DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.				
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.		
ARID DISTRICTS.															
Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Multan ...	0.26	...	0.99	...	...	0.99	...	0.11	...	(a) 0.38	0.49	0.76	(a)	The trees on 0.17 acres transplanted to roadside avenues and the trees on 0.21 acres sold by the Municipal Committee.	
Dera Ghazi Khan	5.25	...	...	...	...	0.12	0.12	...	...	(c) 5.25	5.25	0.12	(c)		
Mianwali ...	6.77	...	0.83	...	...	0.83	...	...	4.85	...	4.85	2.75	(d)		
Montgomery ...	...	...	0.70	...	...	0.70	...	0.13	...	...	0.13	0.57	(d)		
Jhang ...	...	...	2.00	...	...	2.00	...	0.25	...	...	0.25	1.75	(e)	(b) Transfer from Multan Provincial Division.	
Jhang Municipality	...	...	0.01	...	...	0.01	...	...	...	...	...	0.01	(e)		
Lyalpur ...	...	...	...	...	...	...	...	...	...	...	...	...	(f)		
Shahpur ...	9.15	...	2.25	...	...	2.25	...	...	...	...	...	11.40	(f)	(c) Trees removed and planted on land already under groves.	
Hissar ...	127.14	...	1.00	...	...	1.00	...	...	...	...	...	128.14	(g)		
Hissar Municipality	...	...	...	...	...	...	...	...	...	...	...	...	(g)		
Total Arid Districts.	148.57	...	7.78	...	...	0.12	7.90	...	0.49	4.85	5.63	10.97	(h)	(d) 4.45 acres transferred to groves and 0.40 acre to gardens.	
VERY DRY DISTRICTS.															
Ferozepore ...	0.50	...	...	...	...	...	...	...	...	...	...	0.50	(e)	(e) Transfer from Delhi Provincial Division.	
Rohtak ...	2.61	...	1.50	...	...	(e) 0.04	1.54	...	...	...	...	4.15	(f)	(f) Reason not given.	
Lahore ...	11.79	...	...	...	...	...	...	...	...	(f) 0.25	0.25	11.54	(g)	(g) Transplanted to roadside avenues.	
Lahore Municipality	0.20	...	1.24	...	...	1.24	...	...	...	...	...	1.44	(g)		
Karnal ...	3.37	...	...	...	...	...	...	0.45	...	...	0.45	2.92	(h)		
Total Very Dry Districts.	18.47	...	2.74	...	...	0.04	2.78	...	0.45	...	0.25	0.70	(h)	(h) Given up during the period.	
DRY DISTRICTS.															
Jhelum ...	13.94	...	...	...	...	...	...	13.79	...	...	...	0.15	(i)	(i) Transferred to groves.	
Gujranwala ...	0.52	...	8.80	...	...	8.80	...	0.35	...	(g) 2.62	2.97	6.35	(j)	(j) 1.16 acres zamindar's land given for nurseries, 1.61 acres Government waste land, 0.66 acres taken on rent at Rs. 6 a year, 0.60 acres acquired under Land Acquisition Act from zamindars.	
Gurgaon ...	0.59	...	1.66	...	...	1.66	...	0.59	...	(g) 0.59	0.59	1.66	(j)		
Amritsar ...	23.70	...	1.00	...	...	1.00	...	0.37	...	(g) 2.16	2.53	22.17	(k)		
Amritsar Municipality.	7.34	...	...	...	...	...	...	...	...	(h) 0.55	0.55	7.34	(k)		
Delhi ...	0.65	...	1.07	...	...	1.07	...	...	...	(g) 0.55	0.55	1.17	(l)		
Delhi Municipality	...	...	1.70	...	...	1.70	...	...	...	...	1.00	0.70	(l)		
Jullundur ...	6.26	...	...	...	...	...	...	...	...	...	...	6.26	(m)	(k) Transfer from Rawalpindi Provincial Division.	
Ludhiana ...	2.77	...	0.13	...	...	0.13	...	...	0.84	...	0.84	2.06	(n)		
Rawalpindi ...	...	...	...	...	...	(j) 4.03	4.03	...	...	...	...	4.03	(n)	(l) Transfer from Ambala Provincial Division.	
Rawalpindi Municipality.	1.78	...	0.25	...	...	0.25	...	0.32	...	...	0.32	1.71	(m)	(m) Abandoned.	
Attock ...	0.32	...	5.01	...	...	(k) 0.06	5.07	...	1.28	...	1.28	4.11	(n)		
Attock Municipality	0.01	...	...	...	...	...	...	...	...	...	...	0.01	(n)	(n) Transferred to Plantations.	
Total Dry Districts.	57.88	...	19.62	...	...	4.09	23.71	...	16.70	0.84	6.33	23.87			
FAIRLY MOIST OR FOREST DISTRICTS.															
Gujrat ...	4.36	...	47.21	...	...	47.21	...	37.01	(i) 0.20	(g) 1.53	38.74	12.83	(g)		
Gurdaspur ...	3.60	...	0.32	...	...	0.32	1.70	0.01	...	(m) 1.71	1.71	2.21	(m)		
Ambala ...	0.78	...	2.29	...	...	0.99	3.28	1.31	...	(n) 0.25	1.56	2.50	(n)		
Sialkot ...	8.87	...	6.56	...	...	6.56	...	...	5.50	...	5.50	9.93	(i)		
Sialkot Municipality	...	...	0.07	...	...	0.07	...	...	...	...	...	0.07	(i)		
Hoshiarpur ...	2.11	...	2.73	...	...	2.73	...	0.13	2.11	...	2.24	2.60	(j)		
Simla ...	3.27	...	...	...	...	...	...	...	...	...	...	3.27	(j)		
Kangra ...	3.54	4.51	...	...	...	4.51	...	...	...	...	...	8.05	(k)		
Kangra Municipality.	10.72	...	...	...	...	...	...	...	...	...	...	10.72	(k)		
Total Forest Districts.	37.25	4.51	59.18	...	...	0.99	64.68	1.70	38.46	7.81	1.78	49.75	(l)		
Total 1905-06 to 1917-08.	282.17	4.51	89.32	...	...	5.24	99.07	1.70	56.10	13.50	13.99	85.29	(l)		
Total 1902-03 to 1901-05.	400.82	...	...	...	...	30.90	...	...	...	...	...	169.55	(m)		

[illegible]

STATEMENT No. I (b) —concluded.

PROGRESS STATEMENT OF NURSERIES IN THE CANALS DIVISION FOR THE TRIENNIAL PERIOD 1905-06 to 1907-08.

1	2	3					4					5	6
DISTRICT OR DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Sirhind Canal, Bhatinda Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenáb Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenáb Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenáb Canal, 3rd Division.	...	...	1'01	...	...	1'01	...	0'80	...	0'20	1'00	0'01	
Upper Chenáb Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenáb Canal, 5th Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenáb Canal, Khanki Division.	2'68	...	0'50	...	(c) 1'40	1'90	...	0'30	1'87	...	2'17	2'41	(c) Received from Lyallpur Division.
Lower Chenáb Canal, Lyallpur Division.	1'40	...	...	...	...	...	...	...	...	(d) 1'40	1'40	...	(d) Transferred to Khanki Division.
Lower Chenáb Canal, Lower Gugera Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenáb Canal, Upper Gugera Division.	0'69	0'11	5'29	...	(e) 0'70	6'10	4'59	...	1'40	...	5'99	0'80	(e) Self-grown.
Lower Chenáb Canal, Jhang Division.	...	...	2'00	...	...	2'00	...	...	2'00	...	2'00	...	
Lower Chenáb Canal, Burala Division.	...	...	3'67	...	...	3'67	...	...	0'67	...	0'67	3'00	
Upper Jhelum Canal, 2nd Division.	...	...	0'80	...	...	0'80	...	*0'46	...	...	0'46	0'34	* Due to heavy rains during 1906-07.
Upper Jhelum Canal, 3rd Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Jhelum Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Railway and Quarries Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 2nd Division.	...	...	1'72	...	...	1'72	...	†0'02	...	...	0'02	1'70	† Due to bad soil.
Lower Jhelum Canal, 3rd Division.	3'81	1'70	11'90	...	...	13'60	...	1'20	6'30	...	7'50	9'91	
Shahpur Irrigation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Total 1905-06 to 1907-08.	135'78	1'81	76'35	0'24	2'10	80'50	4'91	5'24	58'73	5'70	74'58	41'70	
Total 1902-03 to 1904-05.	75'84	...	...	...	...	62'03	...	...	...	...	101'34	36'53	

† The Swat River Canal, having been transferred to North-West Frontier Province during the period of this report 0'75 acres being the area of nurseries have been excluded from the opening balance of this statement.

STATEMENT No. I (c).

PROGRESS STATEMENT OF NURSERIES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1905-06 TO 1907-08.

1	2	3					4					5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Rawalpindi Division	3.11	0.11	3.53	...	...	3.64	...	0.21	...	(a) 3.54	3.75	3.00	
Simla Division	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division	...	...	2.00	...	...	2.00	...	...	...	...	...	2.00	
Lahore Division	5.65	...	0.80	...	...	0.80	...	...	(b) 0.47	...	0.47	5.98	
Jullundur Division	1.07	...	0.76	...	...	0.76	...	0.36	(c) 0.12	(d) 0.80	1.28	0.55	
Lyallpur Division	...	...	...	...	...	...	...	...	...	...	...	...	
Gujranwala Division	1.29	...	0.87	...	...	0.87	...	...	...	(e) 1.02	1.02	1.14	
Shahpur Division	28.05	...	...	...	...	...	...	...	...	...	...	28.05	
Multan Division	0.14	...	...	...	...	...	...	...	...	(f) 0.12	0.12	0.02	
Ambala Division	1.25	...	2.65	...	...	2.65	...	0.50	(b) 0.75	(g) 0.99	2.24	1.66	
Delhi Division	1.62	...	0.28	...	(h) 0.04	0.32	...	...	...	(i) 0.04	0.04	1.90	
Ferozepore Division	0.42	...	1.54	...	(j) 0.53	2.07	...	0.60	(c) 1.07	(k) 0.04	1.71	0.78	
Total 1905-06 to 1907-08.	42.60	0.11	12.43	...	0.57	13.11	...	1.67	2.41	6.55	10.63	45.08	
Total 1902-03 to 1904-05.	10.03	...	...	...	...	36.71	...	...	...	...	6.14	42.60	

(a) 0.06 acres transferred to Attock District and 3.48 acres transplanted to avenues.
 (b) To plantations.
 (c) To groves.
 (d) 0.27 acres transplanted to roadside avenues and 0.53 acres transferred to Ferozepore Provincial Division.
 (e) Transplanted to roadside avenues.

(f) Transferred to Dera Ghazi Khan District.
 (g) Transferred to Ambala District.
 (h) Transfer from Ferozepore Provincial Division.
 (i) Transferred to Rohtak District.
 (j) Transfer from Jullundur Provincial Division.
 (k) Transferred to Delhi Provincial Division.

STATEMENT No. II (a).

PROGRESS STATEMENT OF PLANTATIONS IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1905-06 to 1907-08.

1	2	3	4						5						6
District.	Area taken up for plantation at the beginning of the triennial period	Area successfully stocked at the beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
ARID DISTRICTS.															
Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Multan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	60'00
Dera Ghazi Khan ...	1,677'00	60'00	...	...	...	...	...	...	...	...	...	...	...	...	158'49
Mianwali ...	158'49	151'24	...	7'25	...	...	...	7'25	...	...	...	...	...	...	...
Montgomery ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang Municipality ...	1'22	1'22	...	...	...	...	...	...	...	...	...	...	...	...	1'22
Lyallpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hissar ...	139'66	83'23	...	...	...	...	...	...	...	...	...	...	...	...	83'23
Total Arid Districts	1,976'37	295'69	...	7'25	...	...	...	7'25	...	...	...	...	...	...	302'94
VERY DRY DISTRICTS.															
Ferozepore ...	423'00	292'00	...	4'00	...	...	...	4'00	...	4'00	...	...	...	4'00	292'00
Rohtak ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore Municipality.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Karnal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Very Dry Districts.	423'00	292'00	...	4'00	...	...	...	4'00	...	4'00	...	...	...	4'00	292'00
DRY DISTRICTS.															
Jhelum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gujranwala ...	46'00	46'00	...	...	...	...	...	...	...	...	...	...	...	...	46'00
Gurgaon ...	2,302'72	44'81	...	...	...	...	...	...	...	...	...	...	...	...	44'81
Amritsar ...	1'47	1'47	...	...	...	...	...	...	...	...	...	...	...	...	1'47
Amritsar Municipality.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delhi ...	66'61	18'41	...	2'91	...	...	...	2'91	...	1'41	...	(a) 1'80	3'21	18'11	...
Delhi Municipality	938'73	938'73	...	...	...	...	...	...	...	...	...	...	...	938'73	...
Jullundur ...	92'70	92'70	...	...	...	...	...	...	...	...	...	...	...	92'70	...
Ludhiana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi Municipality.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock ...	5'50	...	...	5'50	...	...	...	5'50	...	...	...	...	...	5'50	...
Attock Municipality.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Dry Districts.	3,453'73	1,142'12	...	8'41	...	...	...	8'41	...	1'41	...	...	1'80	3'21	1,147'32
FAIRLY MOIST OR "FOREST" DISTRICTS.															
Gujrat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gujrat Municipality	...	...	...	...	...	...	...	...	...	...	...	(b) 4'00	(c) 8'00	12'00	13'80
Gurdaspur...	25'80	25'80	...	...	...	...	...	...	...	...	...	...	...	...	...
Ambala ...	...	...	...	(d) 5'50	...	...	...	...	...	...	...	...	...	...	...
Sialkot ...	...	...	...	...	...	...	...	5'50	...	0'50	...	...	...	0'50	5'00
Sialkot Municipality.	2'00	2'00	...	...	...	...	...	...	...	...	...	...	...	...	2'00
Hoshiarpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simla ...	59'00	59'00	...	...	...	...	...	...	...	...	...	...	...	...	59'00
Kangra ...	57'78	57'78	...	...	...	...	...	...	...	...	...	...	...	...	57'78
Kangra Municipality.	137'75	122'30	...	43'00	...	...	...	43'00	...	18'00	...	...	...	18'00	147'30
Total "Forest" Districts.	282'33	266'88	...	43'00	5'50	...	...	48'50	...	18'50	...	4'00	8'00	30'50	284'88
Total 1905-06 to 1907-08.	6,135'43	1,996'69	...	62'66	5'50	...	...	68'16	...	25'91	...	4'00	9'80	37'71	1,927'14
Total 1902-03 to 1904-05.	7,933'13	4,327'80	...	...	...	...	...	22'51	...	...	...	...	...	2,353'62	1,996'69

(a). Made over to Zamindars.

(b). To Municipal Committee of the town.

(c). Three acres made over to Public Works Department for the erection of Settlement Officer's house and 5 acres to station garden.

(d). Transfer from Nurseries.

STATEMENT No. II (b).

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1905-06 to 1907-08.

1	2	3	4						5						6	7
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at the beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
Upper Bari Doab Canal, 1st Division	2,977.00	1,815.38	174.50	157.00	...	...	(a) 431.80	763.30	...	...	...	...	(b) 299.20	299.20	2,279.48	
Upper Bari Doab Canal, 2nd Division	2,184.29	2,138.89	22.90	57.89	...	...	...	80.79	...	35.39	...	...	...	35.39	2,184.29	
Upper Bari Doab Canal, 3rd Division.	1,480.69	1,456.21	...	40.30	2.53	...	(c) 29.40	72.23	...	...	...	...	(c) 29.40	29.40	1,499.04	
Upper Sutlej Division, Inundation Canals.	235.15	240.50	0.01	...	...	...	...	0.01	2.35	5.00	...	...	...	7.35	233.16	
Central Workshop Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 3rd Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sutlej Survey Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Multan Canals Division.	208.10	142.47	...	7.75	...	...	83.09	90.84	...	...	0.14	...	83.09	83.23	150.08	
Dera Ghazi Khan Division, Indus Canals	8.37	8.37	...	1.65	1.35	...	...	3.00	...	3.25	...	...	...	3.25	8.12	
Muzaffargarh Canals Division.	15.66	15.66	...	0.45	0.10	...	0.15	0.70	...	...	...	...	...	...	16.36	
Lower Sutlej Division, Inundation Canals.	22.46	20.44	...	2.02	...	...	...	2.02	...	...	...	...	...	...	22.46	
Western Jumna Canal, Karnal Division.	1,137.33	942.24	...	21.56	...	...	...	21.56	(d) 42.93	17.36	...	...	30.50	90.79	873.01	
Western Jumna Canal, Delhi Division.	740.87	1,076.32	...	...	...	...	...	...	(d) 23.14	5.44	(e) 26.82	...	(f) 285.49	340.89	735.43	
Western Jumna Canal, Hissar Division.	892.97	252.62	504.93	177.35	...	...	...	682.28	(d) 223.48	29.00	...	...	...	252.48	682.42	
Sirhind Canal, Ferozepore Division.	3,255.68	2,218.02	...	159.00	32.12	...	...	191.12	2.48	...	...	...	(g) 43.70	46.18	2,362.96	
Sirhind Canal, Ludhiana Division.	3,931.74	3,948.57	62.53	36.37	10.39	...	...	109.29	843.85	1.50	...	...	...	845.35	3,212.51	
Sirhind Canal, Patiala Division.	3,925.85	2,677.00	...	102.71	...	...	...	102.71	...	61.28	...	...	(h) 19.97	81.25	2,698.46	
Sirhind Canal, Bahatinda Division.	2,087.00	1,239.57	...	39.95	...	...	...	39.95	...	...	...	...	(i) 10.50	10.50	1,269.02	

- (a). Had been felled some time previous and restored by merely coppicing.
 (b). Had been felled prior to process of coppicing.
 (c). Cut and restocked during the period.
 (d). Corrections are due to the area which was not suitable but was included in the last report.
 (e). Being the area of chawki garden, hence deducted, vide Chief Engineer's No. 1522, dated the 11th June 1904.
 (f). 284.60 acres of plantation have been sold while for 0.89 acres no remark has been given.
 (g). Cut and sold.
 (h). Cleared for bamboo plantation.
 (i). Cut and re-sown.

STATEMENT No. II (b).—concluded.

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD
1905-06 to 1907-08.

1	2	3	4						5						6	7
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Upper Chenab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 2nd Division.	25.73	...	...	25.73	...	...	...	25.73	...	20.00	...	...	...	20.00	5.73	
Upper Chenab Canal, 3rd Division.	8.50	...	3.50	5.00	...	...	...	8.50	...	...	...	...	...	...	8.50	
Upper Chenab Canal, 4th Division.	...	...	...	0.50	...	...	...	0.50	...	...	...	...	...	...	0.50	
Upper Chenab Canal, 5th Division.	17.00	...	...	9.60	...	...	...	9.60	...	...	...	...	...	...	9.60	
Lower Chenab Canal, Khanki Division.	1,524.48	883.99	...	116.37	1.87	(j) 220.11	...	338.35	...	11.00	...	...	...	11.00	1,211.34	
Lower Chenab Canal, Lyallpur Division.	953.44	669.06	112.44	136.69	...	(k) 376.87	...	626.00	0.01	* 121.50	...	(l) 220.11	...	341.62	953.44	
Lower Chenab Canal, Lower Gugera Division.	705.63	282.22	43.69	222.99	...	(m) 216.68	...	483.36	24.81	155.43	...	...	...	180.24	585.34	
Lower Chenab Canal, Upper Gugera Division.	1,009.55	650.38	30.76	223.37	1.40	...	...	255.59	17.32	...	...	...	(n) 3.30	20.62	885.29	
Lower Chenab Canal, Jhang Division.	690.71	813.94	8.08	252.62	2.00	...	...	262.70	44.93	18.19	...	(o) 376.87	...	439.99	636.65	
Lower Chenab Canal, Burala Division.	401.04	382.86	10.32	130.37	0.67	...	...	141.36	0.69	* 30.28	...	(p) 216.68	0.38	248.03	276.19	
Upper Jhelum Canal, 2nd Division.	2.00	...	...	2.00	...	...	...	2.00	...	2.00	...	...	...	2.00	...	
Upper Jhelum Canal, 3rd Division.	149.00	...	...	149.00	...	...	...	149.00	...	12.00	...	...	...	12.00	137.00	
Upper Jhelum Canal, 4th Division.	96.30	...	...	96.30	...	...	...	96.30	...	70.60	...	...	...	70.60	25.70	
Railway and Quarries Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division.	515.15	245.80	...	10.00	...	...	...	10.00	...	...	...	...	...	...	255.80	
Lower Jhelum Canal, 2nd Division.	301.00	126.70	...	148.32	...	...	...	148.32	...	60.20	...	...	...	60.20	214.82	
Lower Jhelum Canal, 3rd Division.	1,018.60	270.38	74.42	734.94	6.30	...	...	815.66	140.00	124.38	...	...	...	264.38	821.66	
Shahpur Inundation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total for 1905-06 to 1907-08.	30,524.29	22,517.59	1,048.08	3,067.80	58.73	813.66	544.44	5,532.71	1,365.99	783.80	26.96	813.66	805.53	3,795.94	24,254.36	
Total for 1902-03 to 1904-05.	30,784.75	20,075.75	...	...	...	...	...	4,728.41	...	...	...	...	...	2,081.19	22,722.97	

(j). Transfer from Lyallpur Division.

(k). Transfer from Jhang Division.

(l). Transferred to Khanki Division.

(m). Transfer from Burala Division.

* Due to bad soil.

(n). Transplanted to avenues.

(o). Transferred to Lyallpur Division.

(p). Transferred to Lower Gugera Division.

† The Swat River Canal Circle having been transferred to North-West Frontier Province, the area of that Circle (208.10 acres) has not been included in the opening balance of the statement. 0.72 of an acre by which the closing balance of the last return was increased through a clerical error has also been excluded.

STATEMENT No. II (c).

PROGRESS STATEMENT OF PLANTATIONS IN THE PROVINCIAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1905-06 TO 1907-08.

1	2	3	4							5						6	7
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.							DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.			
															Acres and decimals.		
Rawalpindi Division.	1.72	1.72	...	...	...	...	...	...	...	...	...	...	...	...	...	1.72	
Agra Division...	83.06	83.06	...	...	...	...	...	...	...	...	...	...	...	...	...	83.06	
Lahore Division...	0.89	...	0.89	...	(a) 0.47	...	...	1.36	...	...	...	...	...	...	...	1.36	
Mullandur Division	1.03	0.82	...	...	...	...	...	...	...	...	...	...	...	...	...	0.82	
Ambala Division...	1.14	0.39	...	...	(a) 0.75	...	...	0.75	...	0.02	...	...	...	...	0.02	1.12	
Total 1905-06 to 1907-08.	87.84	85.99	0.89	...	1.22	...	...	2.11	...	0.02	...	...	...	...	0.02	88.08	
Total 1902-03 to 1904-03.	87.58	83.33	...	...	...	...	...	4.47	...	...	...	...	...	...	1.81	85.99	

There are no plantations in the following Divisions:—Simla, Lyallpur, Gujranwala, Shahpur, Multan, Delhi and Ferozepore.

(a) From nurseries.

STATEMENT No. III (a).

PROGRESS STATEMENT OF GROVES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD

1905-06 to 1907-08.

1	2	3						4						5
District.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
ARID DISTRICTS.														
Muzaffargarh	238.83	...	...	...	...	(a) 8.60	8.60	...	...	...	...	(b) 2.01	2.01	245.42
Multan	2.42	0.50	...	...	...	...	0.50	0.73	0.68	...	...	(c) 1.01	2.42	0.50
Dera Ghazi Khan	10.00	...	...	...	...	...	...	...	...	...	...	...	...	10.00
Mianwali	31.29	...	6.00	4.45	...	2.70	13.15	...	...	...	...	...	...	44.44
Montgomery	746.00	...	...	...	...	...	...	...	...	...	...	...	...	746.00
Jhang	27.63	...	...	...	...	...	...	...	...	...	...	...	...	27.63
Jhang Municipality	10.98	...	...	...	...	...	...	...	...	...	...	...	...	10.98
Lyallpur	33.48	...	...	...	...	...	...	...	...	...	(d) 2.50	...	2.50	30.98
Shahpur	1,025.55	...	...	...	1.50	...	1.50	...	...	...	...	(e) 3.50	3.50	1,023.55
Hissar	308.57	...	6.30	...	...	...	6.30	...	...	...	...	...	...	314.87
Hissar Municipality	14.04	...	...	...	...	...	...	...	...	...	...	...	...	14.04
Total Arid Districts ...	2,448.79	0.50	12.30	4.45	1.50	11.30	30.05	0.73	0.68	...	2.50	6.52	10.43	2,468.41
VERY DRY DISTRICTS.														
Ferozepore	385.54	...	10.00	...	...	...	10.00	...	2.00	...	...	...	2.00	393.54
Rohtak	543.94	...	0.50	...	...	...	0.50	...	0.50	...	...	...	0.50	543.94
Lahore	16.73	...	...	...	...	...	...	...	...	...	...	...	...	16.73
Lahore Municipality	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Karnal	363.31	...	...	...	...	...	...	...	...	...	...	...	...	363.31
Total Very Dry Districts ...	1,309.52	...	10.50	...	...	...	10.50	...	2.50	...	...	...	2.50	1,317.52
DRY DISTRICTS.														
Jhelum	5.62	...	...	...	...	...	...	...	...	...	...	...	...	5.62
Gujranwala	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gurgaon	282.86	...	...	...	...	...	...	...	...	...	...	...	...	282.86
Amritsar	48.08	...	4.50	...	...	...	4.50	...	3.60	...	...	...	3.60	48.98
Amritsar Municipality	1.75	...	...	...	...	...	...	...	...	...	...	...	...	1.75
Delhi	20.17	...	...	...	...	...	...	...	...	...	0.37	(f) 0.36	0.73	19.44
Delhi Municipality, ...	1.50	...	...	...	...	...	...	...	...	...	...	...	...	1.50
Jullundur	26.90	...	...	...	...	(g) 20.00	20.00	...	...	...	...	...	...	46.90
Ludhiana	188.98	...	...	0.84	...	...	0.84	...	...	...	...	(h) 22.42	22.42	167.40
Rawalpindi	162.26	...	...	...	...	...	...	...	...	...	...	...	...	162.26
Rawalpindi Municipality	15.21	...	...	...	...	...	...	...	...	...	...	...	...	15.21
Attock	25.65	...	6.00	...	...	...	6.00	...	...	...	...	...	...	31.65
Attock Municipality	3.05	...	...	...	...	...	...	...	...	...	...	...	...	3.05
Total Dry Districts ...	782.03	...	10.50	0.84	...	20.00	31.34	...	3.60	...	0.37	22.78	26.75	786.62
FAIRLY MOIST OR "FOREST" DISTRICTS.														
Gujrat	184.92	...	...	...	...	...	...	...	5.80	42.13	...	...	47.93	136.99
Gujrat Municipality	2.00	...	...	...	...	...	...	...	0.20	...	...	...	0.20	1.80
Gurdaspur	15.76	...	...	...	...	...	...	...	...	...	...	...	...	15.76
Ambala	32.43	...	...	...	0.68	...	0.68	...	...	...	(i) 1.63	...	0.63	32.48
Sialkot	23.39	...	...	...	(k) 3.50	...	3.50	...	1.00	...	...	...	1.00	25.89
Sialkot Municipality	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hoshiarpur	16.23	...	...	2.11	...	...	72.11	...	1.00	...	...	...	1.00	17.34
Simla	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra	20.50	...	...	...	...	...	...	...	...	...	...	...	...	20.50
Kangra Municipality	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Forest Districts ...	295.23	...	...	2.11	4.18	...	6.29	...	8.00	42.13	0.63	...	50.76	250.76
Total 1905-06 to 1907-08 ...	4,835.57	0.50	33.30	7.40	5.68	31.30	78.18	0.73	14.78	42.13	3.50	29.30	90.44	4,823.31
Total 1902-03 to 1904-05 ...	5,510.70	...	...	...	...	...	178.06	...	...	...	...	...	853.19	4,835.57

(a) Land purchased.

(b) Given up for Victoria Memorial Hall.

(c) Sold.

(d) 1.50 acres made over to a Zamindar, and 1.00 acres to the Municipal Committee of the town.

(e) A new garden was started.

(f) Trees died.

(g) Purchased for horse and cattle fair.

(h) Taken over by North-Western Railway for the extension of Ludhiana Railway Station yard.

(i) Transfer from Amballa Provincial Division.

(j) Transferred to Ambala Provincial Division.

* Said to have been transferred to nurseries but not shown in that statement.

† From nurseries.

STATEMENT No. III (c).

PROGRESS STATEMENT OF GROVES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 190506 to 1907-08.

1				2		3							4						5		6
Division.				Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.							DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.		
					Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.					
																	Acres and decimals.			Acres and decimals.	Acres and decimals.
Rawalpindi Division				216.55	...	1.19	...	...	...	1.19	...	0.50	...	...	...	0.50	217.24				
Amala Division				...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Angra Division				0.48	...	...	...	...	...	...	...	...	...	...	...	...	0.48				
Lahore Division				9.12	...	...	...	...	...	...	...	...	...	...	...	...	9.12				
Jullundur Division				2.75	...	...	(a) 0.12	...	...	0.12	...	...	...	...	...	...	2.87				
Lyalpur Division				...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Gujranwala Division				270.13	...	...	...	...	...	...	...	...	...	...	...	...	270.13				
Shahpur Division				...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Multan Division				3.06	...	...	...	...	...	...	...	...	...	...	...	...	3.06				
Amballa Division				0.13	...	...	...	(b) 0.63	...	0.63	...	...	(c) 0.68	...	...	0.68	0.08				
Delhi Division				...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Ferozepore Division... ..				...	19.45	...	(a) 1.07	...	...	20.52	...	...	...	...	...	...	20.52				
Total 1905-06 to 1907-08				502.22	19.45	1.19	1.19	0.63	...	22.46	...	0.50	...	0.68	...	1.18	523.50				
Total 1902-03 to 1904-05				974.06	...	...	...	...	...	734.37	...	...	...	...	...	1,206.21	502.22				

(a) From nurseries.

(b) Received from Amballa District.

(c) Transferred to Amballa District.

STATEMENT No. IV (a).
PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1905-06 TO 1907-08.

1	2	3	4					5					6		
District.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.		
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.		Total deductions.	
															Miles and decimals.
ARID DISTRICTS.															
Muzaffargarh...	307.85	140.97	3.25	23.04	(a)	(b)	26.29	5.50	...	...	...	...	5.50	161.76	
Multan ...	1,253.28	323.12	8.30	61.91	3.25	1.13	74.59	75.52	36.90	13.03	...	15.62	141.07	256.64	
Dera Ghazi Khan ...	193.25	30.15	...	47.00	30.49	...	77.49	...	...	...	...	...	...	107.64	
Mianwali ...	64.00	51.55	4.00	6.00	...	...	10.00	...	...	...	...	...	...	61.55	
Montgomery ...	200.00	100.00	...	10.50	...	...	10.50	...	...	...	...	...	...	110.50	
Jhang ...	700.00	54.50	...	78.00	6.85	...	84.85	...	14.85	...	...	...	14.85	124.50	
Jhang Municipality ...	17.49	16.49	...	...	...	...	...	...	...	...	...	...	...	16.49	
Lyallpur ...	1,030.00	229.25	...	358.25	...	...	358.25	...	...	...	...	...	...	587.50	
Shahpur ...	541.12	509.97	...	34.68	9.00	...	43.68	...	15.54	40.25	...	20.50	76.29	477.36	
Shahpur Municipality ...	16.88	16.88	...	...	...	...	...	...	...	...	...	...	...	16.88	
Hissar ...	393.81	107.05	...	18.00	...	...	18.00	...	...	...	...	...	...	125.05	
Hissar Municipality...	5.59	5.21	...	...	...	...	...	...	...	...	...	...	...	5.21	
Total Arid Districts	4,723.27	1,585.14	15.55	637.38	49.59	1.13	703.65	81.02	67.29	53.28	...	36.12	237.71	2,051.05	
VERY DRY DISTRICTS.															
Ferozepore ...	733.84	543.75	...	25.00	...	...	25.00	...	...	...	...	...	...	568.75	
Rohtak ...	473.08	207.18	...	2.00	...	...	2.00	...	...	...	(g)	1.73	1.73	207.45	
Lahore ...	413.41	264.94	...	53.50	...	...	53.50	...	9.00	...	(h)	22.00	31.00	287.44	
Lahore Municipality...	62.18	55.68	...	3.89	...	...	3.89	0.39	...	...	...	...	0.39	59.18	
Karnal ...	577.89	128.59	...	10.00	17.50	...	27.50	...	...	...	...	...	...	156.09	
Karnal Municipality...	8.45	7.95	...	...	...	...	...	...	...	...	...	...	...	7.95	
Total Very Dry Districts	2,268.85	1,208.09	...	94.39	17.50	...	111.89	0.39	9.00	...	23.73	...	33.12	1,286.86	
DRY DISTRICTS.															
Jhelum ...	459.01	310.83	...	6.00	(j) 2.54	...	8.54	...	1.98	4.02	...	...	6.00	313.37	
Jhelum Municipality	22.89	21.89	...	1.00	...	...	1.00	...	...	...	...	...	...	22.89	
Gujranwala...	553.38	204.26	...	51.25	...	...	51.25	...	4.50	...	...	...	4.50	251.01	
Gurgaon ...	396.15	230.13	...	...	...	...	...	...	...	...	...	...	...	230.13	
Amritsar ...	288.45	198.10	...	32.34	...	...	32.34	...	13.70	6.74	...	...	20.44	210.00	
Amritsar Municipality	66.00	58.09	...	...	...	...	...	...	...	...	...	...	...	58.09	
Delhi ...	360.85	155.97	2.50	11.89	18.00	...	32.39	12.12	4.77	0.80	(l)	6.37	7.31	156.99	
Delhi Municipality ...	38.00	31.80	...	0.20	...	...	0.20	...	...	...	(l) 5.00	...	5.00	27.00	
Jullundur ...	283.80	234.93	...	...	...	...	...	...	...	...	...	...	...	234.93	
Ludhiana ...	291.81	225.66	...	6.00	...	...	6.00	...	...	...	...	...	...	231.56	
Rawalpindi ...	471.00	304.00	...	...	...	...	...	...	...	...	...	...	...	304.00	
Rawalpindi Municipality	18.00	11.00	...	0.25	...	...	0.25	...	...	...	...	0.50	0.50	10.75	
Attock ...	861.58	97.85	...	23.40	...	...	23.40	...	...	...	...	...	...	121.25	
Attock Municipality	5.23	4.25	...	...	...	...	...	...	...	...	...	...	...	4.25	
Total Dry Districts	4,116.15	2,088.66	2.50	132.33	20.54	...	155.37	12.12	24.95	11.56	11.37	7.81	67.81	2,176.22	
FAIRLY MOIST OR FOREST DISTRICTS.															
Gujrat ...	612.90	450.82	...	117.40	...	...	117.40	...	44.26	3.34	...	...	47.60	520.62	
Gujrat Municipality...	12.33	11.77	...	0.12	...	(n)	0.12	...	0.20	0.08	...	...	0.28	11.61	
Gurdaspur ...	610.00	487.78	...	22.35	...	(o)	19.47	41.82	19.47	8.52	...	...	27.99	501.61	
Amballa ...	303.46	128.55	1.56	3.35	18.12	...	23.03	...	...	8.83	0.50	...	9.33	142.25	
Sialkot ...	842.50	552.37	...	83.00	...	...	83.00	...	36.50	20.50	(p) 0.99	...	57.99	577.38	
Sialkot Municipality	6.50	5.75	...	...	(q) 0.99	...	0.99	...	0.50	...	...	...	0.50	6.24	
Hoshiarpur ...	513.16	494.75	...	12.50	...	...	12.50	...	0.50	...	...	...	0.50	506.75	
Simla ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra ...	521.67	496.21	...	45.42	...	...	45.42	...	19.96	...	...	...	19.96	521.67	
Dharmasala Municipality	6.35	6.35	...	...	...	...	...	...	...	...	...	...	...	6.35	
Total Forest Districts	3,428.87	2,634.35	1.56	284.14	19.11	...	19.47	324.28	121.39	41.27	1.49	...	164.15	2,794.48	
Total 1905-06 to 1907-08	14,537.14	7,516.24	19.61	1,148.24	106.74	...	20.60	1,295.19	93.53	222.63	106.11	36.59	43.93	8,308.64	
Total 1902-03 to 1904-05	13,964.60	7,229.58	...	...	...	...	959.45	...	...	...	...	...	672.79	7,516.24	

- (a) Transfer from Multan Provincial Division
(b) Some are self grown and some taken from zemindars
(c) Disposed of by rain action and sale.
(d) Transfer from Lyallpur Provincial Division.
(e) Transfer from Shahpur Provincial Division.
(f) Washed away by river.
(g) Transferred to Ferozepore Provincial Division.

- (h) Transferred to Lyallpur Provincial Division.
(i) Transfer from Ambala Provincial Division.
(j) Transfer from Rawalpindi Provincial Division.
(k) Transfer from Delhi Provincial Division.
(l) Transferred to Delhi Provincial Division.
(m) Trees died.
(n) The area was planted during the period but failed.

- (o) Transferred to Ambala Provincial Division.
(p) Transferred to Sialkot Municipality.
(q) Transfer from Sialkot District.
(r) Includes 30.12 miles of avenues received in transfer from Jullundur Provincial Division. As no deduction was shown by the Deputy Commissioner when this length was transferred to Public Works Department in 1903.

STATEMENT No. IV (b).

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1905-06 to 1907-08.

1	2	3	4					5						6	7
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
Upper Bari Doab Canal, 1st Division.	178.70	154.26	23.00	2.90	...	...	25.90	...	...	2.90	...	...	2.90	177.26	
Upper Bari Doab Canal, 2nd Division.	100.80	100.80	...	...	...	...	...	...	...	...	...	...	...	100.80	
Upper Bari Doab Canal, 3rd Division.	114.00	87.20	...	...	...	...	...	...	...	...	...	1.00	1.00	86.20	
Upper Sutlej Division, Inundation Canals.	528.46	358.12	10.31	21.20	...	3.50	35.07	8.65	4.10	...	...	...	12.75	380.38	
Central Workshop Division...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 3rd Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sutlej Survey Division	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Sultan Canals Division	443.75	297.22	...	77.84	(a) 0.60	...	78.44	98.95	26.40	16.60	(a) 0.60	...	142.55	233.11	
Sera Ghazi Khan Division, Indus Canals.	572.90	178.67	8.90	45.78	...	...	54.68	...	14.37	17.10	...	11.27	42.74	190.56	
Muzaffargarh Canals Division	220.70	149.06	...	11.27	...	...	11.27	...	1.83	...	...	...	1.83	158.50	
Lower Sutlej Inundation Canals Divisions.	560.46	245.36	...	8.34	...	...	8.34	...	...	2.00	...	...	2.00	251.70	
Western Jumna Canal, Karnal Division.	252.00	279.54	5.00	1.25	11.00	...	17.25	157.24	...	...	...	† 4.10	161.34	135.45	
Western Jumna Canal, Delhi Division.	277.23	336.76	7.40	9.00	...	...	16.40	55.43	9.00	...	...	11.50	75.93	277.23	
Western Jumna Canal, Hissar Division.	163.00	203.37	...	19.85	...	...	19.85	...	71.42	1.75	...	...	73.17	150.05	
Sirhind Canal, Ferozepore Division.	290.20	107.78	8.54	9.00	...	...	12.54	...	5.10	...	...	...	5.10	115.22	
Sirhind Canal, Ludhiana Division.	247.72	113.10	62.61	8.73	...	...	71.34	...	0.30	...	...	...	0.30	184.14	
Sirhind Canal, Patiala Division.	221.74	168.64	...	7.90	...	...	7.90	...	5.90	...	...	...	5.90	170.64	
Sirhind Canal, Bhatinda Division.	126.80	57.89	...	...	...	...	...	...	...	...	...	...	...	57.89	
Upper Chenab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 3rd Division.	44.20	...	...	2.00	...	...	2.00	...	1.00	...	...	...	1.00	1.00	
Upper Chenab Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 5th Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	

(a) Transferred and replanted for Manjdarya bridge.

(†) Taken up for silting operation.

STATEMENT No. IV (b)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1905-06 TO 1907-08.

1	2	3	4					5							6
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.							Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.
			Corrections of lengths as recorded.	Successfully planted.	Transferred from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
														Miles and decimals.	
Lower Chenab Canal, Khanki Division.	269.69	107.76	...	8.40	(b) 32.90	...	41.30	...	7.60	...	...	...	7.60	141.16	
Lower Chenab Canal, Lyallpur Division.	484.42	229.60	...	18.78	(c) 79.58	...	98.36	3.46	*	17.00	(d) 44.40	...	64.86	263.74	
Lower Chenab Canal, Lower Gugera Division.	706.02	53.42	13.15	118.06	(e) 176.30	...	307.51	24.20	103.25	...	...	...	127.45	233.76	
Lower Chenab Canal, Upper Gugera Division.	587.49	337.46	...	108.80	...	...	108.80	13.00	21.00	24.93	...	...	58.93	387.56	
Lower Chenab Canal, Jhang Division.	469.61	212.68	31.18	123.56	...	...	154.74	2.34	*	50.20	(f) 79.58	...	132.12	235.32	
Lower Chenab Canal, Buralla Division.	303.62	91.62	92.40	240.11	...	...	332.51	...	13.49	...	(g) 176.30	...	189.79	234.32	
Upper Jhelum Canal, 2nd Division.	3.50	...	...	3.50	...	...	3.50	...	**	3.00	...	...	3.00	0.50	
Upper Jhelum Canal, 3rd Division.	10.90	...	...	0.40	...	...	0.40	...	†	0.40	...	...	0.40	...	
Upper Jhelum Canal, 4th Division.	22.90	...	...	2.94	...	...	2.94	...	††	2.94	...	...	2.94	...	
Railway and Quarries Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division.	196.24	60.14	...	21.20	...	...	21.20	...	...	...	...	...	...	81.34	
Lower Jhelum Canal, 2nd Division.	587.70	232.60	20.40	369.10	...	...	389.50	...	††	114.60	...	...	114.60	507.50	
Lower Jhelum Canal, 3rd Division.	539.00	40.95	46.20	205.30	...	...	249.50	...	64.15	...	...	5.50	69.65	220.80	
Shahpur Inundation Canals Division.	250.29	70.86	...	...	...	...	...	4.20	...	34.70	...	...	38.90	31.96	
		**													
Total 1905-06 to 1907-08...	8,773.14	4,274.86	324.09	1,443.16	300.38	3.50	2,071.13	367.47	537.05	99.98	300.88	33.37	1,338.75	5,007.24	
Total 1902-03 to 1904-05...	8,486.24	4,105.59	...	...	...	...	1,207.58	...	...	...	...	...	832.40	4,490.77	

(b) Transfer from Lyallpur Division.

(c) Transfer from Jhang Division.

(d) 32.90 miles transferred to Lyallpur Division and 11.50 miles to Lyallpur Municipality.

(e) Transfer from Buralla Division.

(f) Transferred to Lyallpur Division.

(g) Transferred to Lower Gugera Division.

* Due to bad soil.

** Due to heavy rains.

† Failed from frost.

†† Failure due to drought as well as poor soil.

** 265.91 miles on account of the Swat River Canal Circle have been excluded from these figures in consequence of the transfer of that circle to the North-West Frontier Province.

STATEMENT No. IV (c).

PROGRESS STATEMENT OF AVENUES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1905-1906 TO 1907-1908.

1	2	3	4					5.						6	7
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
Rawalpindi Division	132.50	92.34	...	7.84	...	...	7.84	8.17	1.51	0.55	(a) 2.54	...	12.77	87.41	
Simla Division	159.34	0.34	102.00	9.28	...	...	111.28	...	11.58	0.37	...	...	11.95	99.67	
Kangra Division	93.24	19.74	...	14.59	...	...	14.59	...	0.25	...	...	...	0.25	34.08	
Lahore Division	118.30	85.62	...	8.75	(b) 22.00	...	30.75	...	...	...	...	...	...	116.37	
Jullundur Division	125.36	182.36	...	11.77	...	...	11.77	...	1.00	1.00	(c) 87.12	...	89.12	105.01	
Lyalpur Division	15.00	6.85	...	...	...	...	...	...	...	...	(d) 6.85	...	6.85	...	
Gujranwala Division	107.41	97.42	8.50	6.50	...	...	15.00	5.50	...	...	...	...	5.50	106.92	
Shahpur Division	29.94	9.00	...	6.88	...	...	6.88	...	1.20	...	(e) 9.00	...	10.20	5.68	
Multan Division	73.86	80.43	...	0.90	...	...	0.90	...	...	...	(f) 33.74	...	33.74	47.59	
Ambala Division	306.00	185.88	96.50	63.79	(g) 0.50	...	160.79	...	4.25	0.75	(h) 35.62	...	40.62	306.05	
Delhi Division	87.00	101.75	...	7.50	(i) 31.77	...	39.27	47.75	6.00	...	(j) 18.00	...	71.75	69.27	
Ferozepore Division	108.34	42.50	...	7.82	(k) 58.73	...	66.55	15.75	2.25	0.64	(l) 20.40	1.42	40.46	68.59	
Total 1905-06 to 1907-08 ...	1,356.29	904.23	207.00	145.62	113.00	...	465.62	77.17	28.04	3.31	213.27	1.42	323.21	1,045.64	
Total 1902-03 to 1904-05 ...	1,585.93	875.50	...	...	...	...	262.29	...	...	...	...	...	233.56	804.23	

(a) Transferred to Jhelum District.

(b) Received from Lahore District.

(c) 30.12 miles transferred to Gurdaspur District and 57.00 miles to Ferozepore Provincial Division.

(d) Transferred to Jhang District.

(e) Transferred to Shahpur District.

(f) 30.49 miles transferred to Dera Ghazi Khan District and 3.25 miles to Multan District.

(g) Received from Ambala District.

(h) Received in transfer from Simla Provincial Division, on the transfer of Kulu Sub-Division, but as the length was not shown in the previous report thus entered in this column.

(i) 17.50 miles transferred to Karnal District and 18.12 miles to Ambala District.

(j) 20.40 miles received from Ferozepore Provincial Division, 6.37 miles from Delhi District and 5.00 miles to Delhi Municipality.

(k) Transferred to Dehli District.

(l) 1.73 miles received from Rohtak District and 57.00 miles from Jullundur Provincial Division.

(m) Transferred to Delhi Provincial Division.

* Extension in 1902-03 to 1904-05 = 6.17 miles.
Extension in 1905-06 to 1907-08 = 8.42 miles.

STATEMENT No. V (a).

INCOME FROM ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD 1905-06 to 1907-08.

1	2	3	4	5	6	7	8
DISTRICT	Ornamental Gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh	3,141	...	...	9,289	807	13,237	
Multan	7,231	...	...	6,450	41	13,722	
Dera Ghazi Khan	1,458	...	...	1,067	...	2,525	
Mianwali	5,337	...	642	694	...	6,673	
Montgomery	2,408	...	...	1,855	...	4,263	
Jhang	2,473	5	...	1,322	926	4,726	
Do. Municipality	114	...	...	2,599	705	3,418	
Lyallpur	...	...	...	700	...	700	
Shahpur	5,924	...	...	18,795	18,986	43,705	
Hissar	2,018	...	...	3,486	...	5,504	
Do. Municipality	719	...	...	...	...	719	
Ferozepore	1,853	...	3,230	20,528	...	25,611	
Rohtak	2,857	3	...	4,061	17	6,938	
Lahore	4,281	...	...	9,001	...	13,282	
Do. Municipality	21,012	...	...	2,452	652	24,116	
Karnal	1,959	44	...	2,414	250	4,667	
Jhelum	7,223	...	...	...	13,525	20,748	
Gujranwala	4,575	...	...	12,964	...	17,539	
Do. Municipality	1,556	...	...	903	...	2,459	
Gurgaon	261	75	312	7,594	...	8,242	
Amritsar	529	...	...	13,424	259	14,212	
Do. Municipality	12,296	...	...	...	23,890	36,186	
Delhi	...	...	...	5,895	6,000	11,895	Includes Rs. 6,000 granted by Government in 1906-07 and 1907-08.
Do. Municipality	24,018	71	6,663	457	...	31,209	
Jullundur	1,552	898	120	14,614	2,112	19,296	
Ludhiana	5,958	...	...	12,680	...	18,638	
Rawalpindi	3,125	...	...	8,538	...	11,663	
Do. Municipality	1,397	...	...	1,344	611	3,352	
Attock	4,430	...	...	3,265	77	7,772	
Do. Municipality	500	18	...	301	...	819	
Gujrat	593	...	...	43,342	704	44,638	
Do. Municipality	514	...	...	1,138	13	1,665	
Gardaspur	8,436	44	1,223	15,727	7,904	33,334	
Ambala	1,241	...	...	8,799	...	10,040	
Sialkot	10,095	1,320	...	98,117	876	1,10,408	
Do. Municipality	...	...	...	962	...	962	
Hoshiarpur	3,248	...	...	42,265	656	46,169	
Simla	...	936	7,786	...	925	9,647	
Kangra	1,608	...	...	3,231	...	4,839	
Total 1905-06 to 1907-08 ...	1,55,939	3,414	19,976	3,80,273	79,936	6,39,538	
Total 1902-03 to 1904-05 ...	1,62,341	7,712	43,995	3,21,555	48,541	5,84,144	

STATEMENT No. V (b).

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD
1905-06 to 1907-08.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, 1st Division	2,955	...	35,083	132	4,468	42,588	
Do., 2nd do ...	...	...	14,739	...	4,465	19,204	
Do., 3rd do ...	135	...	30,370	10	3,758	34,273	
Upper Sutlej Division, Inundation Canals.	...	...	4,085	81	2,848	7,014	
Central Workshop Division ...	...	...	...	...	...	...	
Lower Bari Doab Canal, 1st Division	...	...	...	...	...	...	
Do., 2nd do ...	...	...	...	...	...	...	
Do., 3rd do ...	...	...	...	...	...	...	
Sutlej Survey Division ...	...	...	...	...	...	...	
Multan Canals Division ...	534	...	15,018	96	2,849	18,497	
Dera Ghazi Khan Division, Indus Canals.	...	...	2,929	15,375	16	18,220	
Muzaffargarh Canals Division ...	150	...	15,899	4,693	1,030	21,772	
Lower Sutlej Inundation Canals Division.	...	...	178	...	5,521	5,699	
Western Jumna Canal, Karnal Division.	...	...	18,701	...	...	*18,701	* Statement V was not furnished by the Executive Engineer, and these figures have been taken from his narrative report.
Western Jumna Canal, Delhi Division	...	...	26,591	...	1,675	28,266	
Western Jumna Canal, Hissar Division	...	...	30,082	...	9,215	39,297	
Sirhind Canal, Ferozepore Division ...	...	...	29,921	...	...	29,921	
Do., Ludhiana do. ...	84	...	23,450	...	23,815	47,349	
Do., Patiala do. ...	559	...	16,662	...	13,801	31,022	
Do., Bhatinda do. ...	7	...	7,604	...	3,722	11,333	
Upper Chenab Canal, 1st Division ...	...	...	...	...	...	...	
Do., 2nd do. ...	...	...	...	...	...	...	
Do., 3rd do. ...	...	...	...	...	...	...	
Do., 4th do. ...	...	...	...	...	...	...	
Do., 5th do. ...	...	...	...	...	...	...	
Lower Chenab Canal, Khanki Division	...	...	3,559	...	...	3,559	
Do., Lyallpur Division	...	...	637	151	3,425	4,213	
Do., Lower Gugera Division.	...	...	1,307	...	788	2,095	

STATEMENT No. V (b)—concluded.

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD
1905-06 TO 1907-08.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Lower Chenab Canal, Upper Gugeru Division.	31	...	766	...	989	1,736	
Lower Chenab Canal, Jhang Division	...	...	266	65	200	531	
Do., Buralla do. ...	...	...	41	...	...	41	
Upper Jhelum Canal, 2nd Division ...	...	...	...	...	...	...	
Do., 3rd do. ...	...	...	...	...	...	...	
Do., 4th do. ...	...	...	...	...	...	...	
Railway and Quarries Division ...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division ...	...	...	...	...	...	...	
Do., 2nd do. ...	...	...	...	8	...	8	
Do., 3rd do. ...	...	...	...	...	18	18	
Shahpur Inundation Canals Division	...	...	...	5,832	...	5,832	
Total 1905-06 to 1907-08 ...	4,455	...	2,77,838	26,343	82,553	3,91,189	
Total 1902-03 to 1904-05 ...	5,388	...	2,29,465	20,392	61,706	3,16,901	

STATEMENT No. V (c).

INCOME FROM ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE TRIENNIAL PERIOD 1905-06 TO 1907-08.

1	2	3	4	5	6	7	8
Division.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rawalpindi Division	221	213	90	2,917	4,666	8,107	
Simla Division	...	...	...	59	...	59	
Kangra Division	...	...	...	...	1,704	1,704	
Lahore Division	96	...	183	5,050	1,650	6,979	
Jullundur Division	...	...	3,599	21,603	3,349	28,551	
Lyallpur Division	...	...	...	81	32	113	
Gujranwala Division	397	11	...	(a) 21,852	315	22,575	(a). Includes revenue from the sale of grass.
Shahpur Division	...	...	...	...	...	...	
Multan Division	...	...	...	962	...	962	
Ambala Division	27	...	3,317	75	2,800	6,219	
Delhi Division	...	...	...	5,863	1,714	7,577	
Ferozepore Division	...	...	...	5,542	7,416	12,958	
Total 1905-06 to 1907-08 ...	741	224	7,189	64,004	23,646	95,804	
Total 1902-03 to 1904-05 ...	534	...	21	41,840	26,552	68,947	

STATEMENT No. VI (a).

EXPENDITURE ON ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD
1905-06 TO 1907-08.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh	7,007	...	...	...	...	...	10,442	900	3,525	21,874	
Multan	18,822	45	324	...	...	...	11,479	...	1	30,671	
Dera Ghazi Khan	3,618	...	...	...	...	...	795	...	4,168	8,576	
Mianwali	13,000	1,986	...	...	1,944	...	13,738	...	3,089	33,707	
Montgomery	6,767	...	...	109	...	...	...	995	510	8,372	
Jhang	16,364	...	...	190	...	...	6,994	3,009	10,068	36,625	
„ Municipality	1,904	...	...	...	...	...	3,048	...	...	4,952	
Lyalpur	...	...	...	...	...	...	...	23,036	56,036	79,072	
Shahpur	5,160	...	...	...	...	...	33,198	...	1,080	39,438	
Hissar	1,685	2,100	2,800	200	...	...	11,669	24,232	...	42,686	
„ Municipality	915	...	...	...	...	...	589	313	809	2,626	
Ferozepore	12,741	...	84	...	1,181	378	17,099	1,510	3,135	36,128	
Rohtak	3,249	...	402	...	...	...	8,743	173	2,155	14,722	
Lahore	11,605	...	...	...	...	...	7,716	8,159	531	28,011	
„ Municipality	53,451	...	...	...	...	...	5,746	...	5,962	65,159	
Karnal	1,647	...	1,030	...	...	...	7,100	1,043	2,628	13,448	
Jhelum	10,896	...	...	...	...	...	...	...	8,960	19,856	
Gujranwala	14,503	182	...	1,104	...	...	12,474	3,330	4,453	36,046	
„ Municipality	8,677	...	...	...	...	...	932	...	612	10,221	
Gurgaon	3,564	...	105	598	388	...	6,597	...	1,226	12,478	
* Amritsar	2,104	...	536	20	...	...	15,122	1,235	518	19,535	
„ Municipality	26,839	...	...	...	...	...	...	...	27,017	53,856	
Delhi	...	...	...	982	...	...	869	9,233	942	12,026	
„ Municipality	35,502	500	144	...	792	...	6,126	...	5,320	48,384	
Jullundur	6,935	...	2,910	...	187	...	9,432	536	760	20,760	
Ludhiana	9,153	...	...	...	...	...	8,747	1,746	1,828	21,474	
Rawalpindi	1,753	...	...	...	...	...	9,672	...	...	11,425	
„ Municipality	8,993	...	800	...	...	...	...	...	...	9,793	
Attock	21,815	...	5,027	...	...	...	2,240	...	887	29,969	
„ Municipality	1,177	...	...	...	...	...	180	...	...	1,357	
Gujrat	4,588	...	924	200	...	...	23,877	2,569	2,160	34,318	
„ Municipality	1,377	...	...	...	...	...	672	230	...	2,279	
Gurdaspur	6,774	...	2,286	...	...	...	14,524	...	440	24,204	
Ambala	4,483	...	120	240	...	...	5,586	...	456	10,885	
Sialkot	17,069	...	3,295	750	...	...	20,950	14,877	13,753	70,694	
„ Municipality	...	...	...	...	...	...	...	...	711	711	
Hoshiarpur	4,438	...	...	...	...	...	17,881	...	2,563	24,882	
Simla	...	...	487	...	3,364	...	...	...	2,448	6,299	
Kangra	3,006	...	...	...	...	...	* 5,855	...	...	8,861	
Dhamsala Municipality	...	...	...	...	3	143	...	...	...	146	
Total 1905-06 to 1907-08 ...	3,51,576	4,813	21,274	4,384	7,859	521	3,00,092	97,126	1,68,701	9,56,346	
Total 1902-03 to 1904-05 ...	3,54,857	4,461	19,364	1,989	10,220	1,285	2,43,645	29,028	58,216	7,23,065	

* Includes the expenditure incurred under head "nurseries" and "extension of avenues".

STATEMENT No. VI (b).
EXPENDITURE ON ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL
PERIOD 1905-06 to 1907-08.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	WORKS.								ESTAB- LISH- MENT. General supervising establish- ment, including office estab- lishment.	Total.	REMARKS
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.				
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, 1st Division ...	5,237	...	...	...	21,548	11,342	3,495	300	2,184	44,106	
Do., 2nd do. ...	6,139	...	...	...	8,307	5,584	...	...	...	19,980	
Do., 3rd do. ...	3,348	...	...	...	15,491	1,944	625	...	2,880	24,288	
Upper Sutlej Division, Inundation Canals ...	21,754	...	...	...	2,521	...	10,751	640	...	35,666	
Central Workshop Division ...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 1st Division ...	...	...	...	...	...	...	...	...	...	...	
Do., 2nd do. ...	...	...	...	...	...	...	...	...	...	...	
Do., 3rd do. ...	...	...	...	...	...	...	...	...	...	...	
Sutlej Survey Division ...	...	...	...	...	...	...	...	...	...	...	
Multan Canals Division ...	3,184	2,213	845	850	2,498	1,385	1,615	4,998	5,715	23,303	
Dera Ghazi Khan Division, Indus Canals ...	2,556	360	2,267	1,068	2,921	3,085	6,240	1,931	1,403	21,831	
Muzaffargarh Canals Division ...	...	50	...	...	4,122	20	1,385	445	338	6,360	
Lower Sutlej Inundation Canals Division	7,266	...	...	...	...	665	1,910	795	...	10,636	
Western Jumna Canal, Karnal Division ...	...	...	...	...	...	...	...	...	...	*21,633	
Do., Delhi Division ...	11,574	...	...	...	...	...	...	121	19	11,714	
Do., Hissar Division ...	5,482	...	42	...	1,126	144	9,759	1,415	144	18,112	
Sirhind Canal, Ferozepore Division ...	7,538	...	...	...	6,205	9,162	...	...	...	22,903	
Do., Ludhiana Division ...	11,633	...	2,071	...	1,341	962	1,891	888	...	18,781	
Do., Patiala Division ...	9,496	...	...	...	1,184	2,894	...	370	...	13,944	
Do., Bhatinda Division ...	11,453	...	...	...	3,193	4,318	507	...	...	19,474	
Upper Chenab Canal, 1st Division ...	...	...	...	...	...	...	...	...	...	...	
Do., 2nd do. ...	991	567	...	...	...	196	...	129	...	1,888	
Do., 3rd do. ...	3,113	408	...	60	...	...	...	100	983	4,664	
Do., 4th do. ...	...	77	...	...	...	...	...	...	...	77	
Do., 5th do. ...	742	...	...	...	17	198	...	...	...	957	
Lower Chenab Canal, Khanki Division ...	6,384	125	...	5	2,933	4,522	1,335	957	15,380	31,641	
Do., Lyallpur Division ...	7,011	1,583	...	...	13,839	1,234	7,990	1,872	6,239	39,768	
Do., Lower Gugera Division	5,161	546	...	...	23,491	4,361	2,925	1,640	911	39,035	
Do., Upper Gugera Division	8,746	2,567	300	576	7,006	30,872	5,931	1,404	3,919	61,321	
Do., Jhang Division ...	13,503	2,199	200	...	10,438	3,882	6,479	6,558	117	43,374	
Do., Buralla Division ...	4,293	4,266	...	251	7,829	3,804	3,414	6,320	3,969	34,166	
Upper Jhelum Canal, 2nd Division ...	...	22	...	675	...	108	...	175	...	980	
Do., 3rd do. ...	...	...	...	...	...	1,149	...	10	168	1,327	
Do., 4th do. ...	...	...	...	...	...	547	...	12	57	616	
Railway and Quarries Division ...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division ...	7,816	...	...	...	4,920	25	5,784	6,244	...	24,789	
Do., 2nd do. ...	3,677	560	...	1,417	13,115	11,647	20,865	15,769	1,267	68,317	
Do., 3rd do. ...	10,288	300	220	50	11,574	9,096	2,295	2,264	6,299	42,386	
Shahpur Inundation Canals Division ...	1,183	...	...	...	...	...	...	...	230	1,413	
Total 1905-06 to 1907-08 ...	1,79,566	15,863	5,945	4,952	1,65,622	1,13,096	95,196	55,350	52,222	7,09,445	
Total for 1902-03 to 1904-05 ...	1,79,211	9,929	11,819	2,683	1,50,408	1,09,485	95,179	39,439	27,663	6,25,816	

* The Executive Engineer does not give details of the expenditure. The figures have been taken from the narrative report.

† Includes Rs. 21,633 on account of expenditure incurred in the Karnal Division, Western Jumna Canal, the details of which have not been furnished by that Division.

STATEMENT No. VI (c).

EXPENDITURE ON ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1905-06 TO 1907-08.

1	2	3	4	5	6	7	8	9	10	11	12
Division.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rawalpindi Division ...	405	..	1,595	534	173	...	5,918	2,792	...	11,417	
Simla Division...	...	...	...	...	...	...	...	986	...	986	
Kangra Division ...	...	...	...	1,500	...	...	...	3,818	...	5,318	
Lahore Division ...	876	206	850	417	...	20	6,991	1,930	...	11,290	
Jullundur Division ...	99	...	567	682	1,028	...	2,528	1,123	1,445	7,467	
Lyalpur Division ...	...	...	...	...	...	...	460	...	...	460	
Gujranwala Division ...	2,440	...	360	...	...	...	7,541	...	...	10,341	
Shahpur Division ...	...	...	...	...	...	...	1,206	1,623	...	2,829	
Multan Division ...	...	...	...	...	...	...	4,661	120	...	4,781	
Ambala Division ...	300	...	600	...	4,514	...	1,987	...	...	7,361	
Delhi Division ...	...	...	432	...	...	...	2,733	...	878	4,043	
Ferozepore Division ...	...	...	498	450	...	...	2,819	4,204	403	8,974	
Total 1905-06 to 1907-08 ...	4,120	1,206	4,902	3,583	5,710	20	36,814	16,596	2,726	74,677	
Total 1902-03 to 1904-05 ...	2,922	...	2,759	564	4,041	108	34,605	5,208	2,336	52,543	

PANJAB ARBORICULTURE REPORT,
1908-1909 TO 1910-1911.

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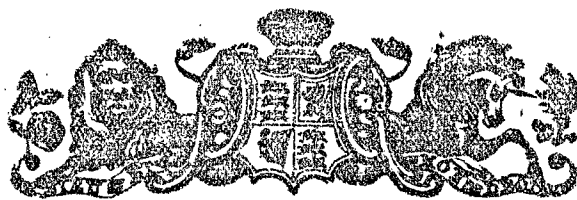
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PROGRESS REPORT

ON

ARBORICULTURE IN THE PANJAB

FOR THE TRIENNIAL PERIOD 1908-1909 TO 1910-1911.



Lahore:

PRINTED AT THE PUNJAB GOVERNMENT PRESS,
1911.

READ—

The Progress Report on Arboriculture in the Punjab for the triennium 1908-09 to 1910-11 submitted with the letter from the Conservator of Forests, Punjab, No. 5240, dated 29th November 1911.

REMARKS.—The report has been received two months late, and the Conservator of Forests reports that the delay is due not only to the late receipt of reports from various officers, but also to the numerous errors these reports contained. This is not the only sign that the great importance of tree-planting in the Punjab is perhaps not yet fully realised. In the last triennial review the necessity of systematic working, and the adoption of working plans, was emphasised by the Lieutenant-Governor. The present report shows that only 19 districts out of 29 possess a working plan. The value of some of the working-plans which do exist is discounted by the omission to mention in them the lengths of roads which are to be planted. In Gurdaspur, where the old plan expired in 1909, no new plan has been prepared, despite the plain orders of Government in this behalf. Once more His Honour must impress on Commissioners the necessity for assuring themselves, not only that an adequate working plan for 3 or 5 years is prepared in every district, but also that the plan is carried out as far as circumstances permit. The discontinuance of the annual reports on arboricultural operations which was sanctioned in Punjab Government letter No. 629, dated 30th November 1910, was conditional on the stricter supervision by Commissioners of the district expenditure on tree-planting, and the Lieutenant-Governor trusts that all Commissioners will realise their added responsibility in this matter.

2. His Honour agrees with the Conservator that the amount of work done in tree-planting during the three years under report does not compare well with that done in the previous three years. Avenues planted fell off from 2,737 miles to 1,775, while plantations fell off from 3,130 acres to 2,280. At the same time establishment charges increased by Rs. 1,06,000. It is true that charges for the maintenance of existing avenues increased by nearly two lakhs of rupees, and the results of this expenditure cannot be shewn on paper. His Honour is, however, inclined to doubt whether the increased expenditure on establishments has been accompanied by the improvement in the working of the subordinate staff which might fairly have been expected.

3. At the same time His Honour is glad to acknowledge that steady progress is being made in planting up the roads of the province. Sixty per cent. of the roads suitable for avenues have, now been planted, and it appears from the report that a stricter interpretation of the word "avenue" has now been adopted. At the same time the policy of restricting operations and concentrating work on a few roads has been more generally followed, and no doubt the next triennial report will reflect the results of this policy. The proportion of failures in avenues is still high—26 per cent.—though it has fallen slightly since the last report was written.

It is a question if the division of tracts into arid, very dry, dry and fairly moist districts really helps much in determining the difficulties of arboriculture in the existing conditions of the province. The fact is that where canal water is available trees will grow freely anywhere. Where irrigation is not possible it is very difficult to get trees to grow even in the submontane tracts. At the same time anyone who knew the province 35 years ago must admit that the improvement everywhere in tree-growth is most marked and the whole face of the country has been changed. A desire for greater comfort on the part of the people with the certainty that they will now reap the fruits of their labours have led to a more general planting up of trees and to the allowing of those in existence to attain a better growth. This state of things is a real asset of great value to the province as a whole and one which deserves all possible encouragement.

4. The energy shown in tree-planting varies largely in different districts. Lyallpur district leads the way with an expenditure of Rs. 94,000, closely followed by Lahore municipality (Rs. 93,000), Shahpur district (Rs. 75,000), and Sialkot district (Rs. 74,000). At the other end of the scale are Dera Ghazi Khan (Rs. 6,000), Rawalpindi (Rs. 12,000), Karnal (Rs. 14,000) and Attock (Rs. 15,000). Lyallpur increased its avenues by 118 miles during the period, of which 42 are reported to have failed. With 663 miles of fully planted roadside avenues, Lyallpur sets an example to the whole province. Tree-planting in Lahore municipality has been most successful, as only 261 trees died out of 3,362 planted, and the exertions of the municipal committee are already effecting a transformation in the appearance of the provincial capital. Rawalpindi, despite its exiguous expenditure, planted 60 miles of trees during the period, of which 12 miles failed.

5. Mianwali, Gurgaon and Gurdaspur planted no avenues at all. In Gurdaspur the lack of a plan explains, though it does not condone, this inactivity. In Mianwali there are great difficulties of climate and of soil to be met, but His Honour believes that even here something could be done, with *kikar* and *farash*. The Gurgaon authorities devoted all their energies to filling up gaps and maintaining existing avenues, but as the district has still 160 miles of road to plant, the district board might suitably devote some of its large surplus to this object.

6. The income derived from trees varies as much as the expenditure, but in no proportional degree. In Sialkot where the expenditure was Rs. 74,000 the income was Rs. 1,09,000. In Lyallpur, on the other hand, the income received was only Rs. 5,000, but no doubt this is due to the youth of the trees in that district. In Muzaffargarh an expenditure of Rs. 33,000 produced an income of Rs. 22,000. Shahpur spent Rs. 75,000 and received Rs. 54,000. Gujrat spent Rs. 41,000 and received Rs. 43,000.

7. The figures show, if proof be needed, that tree-planting on a large scale is a profitable enterprise, though immediate realisations cannot be expected. The Lieutenant-Governor has already pointed out the excellent results obtained in some submontane districts by planting up the camping grounds with mango trees, and he would impress on local bodies the importance of spending such money as they can afford on planting trees, whether fruit trees or others, where they can, an object which conduces to the comfort of the people and the eventual amelioration of the climate, and at the same time accumulates for future generations a commercial asset of considerable value.

ORDER.—Ordered that the above remarks be printed and circulated with the report as usual; also that they be published in the *Punjab Government Gazette*, and forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, the Conservator of Forests, Punjab, and all Commissioners in the Punjab.

By order of His Honour the Lieutenant-Governor, Punjab,

H. P. TOLLINTON,

Revenue Secretary to Government, Punjab.

No. 4573-A.
FOREST DEPARTMENT, PUNJAB.

FROM

C. P. FISHER, ESQUIRE,
Conservator of Forests, Punjab,

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF THE
PUNJAB.

Dated LAHORE, the 31st October 1911.

SIR,

I HAVE the honour to submit the Progress Report on Arboriculture in the Punjab for the period 1908-09 to 1910-11. The arrangement of the subject is the same as in the previous report.

2. This report was due to Government on the 1st September 1911, but has been delayed on account of the late receipts of reports from some of the officers concerned and numerous errors and discrepancies in some of the reports which entailed correspondence.

I have the honour to be,

SIR,

Your most obedient servant,

C. P. FISHER,
Conservator of Forests, Punjab.

PROGRESS REPORT

ON THE

ARBORICULTURE IN THE PUNJAB

FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

A.—District Arboriculture.

District Boards and Municipalities.

(a)—GENERAL.

1. The total length of avenues under the District Boards in the Punjab at the commencement of the period under review was 8,302·29 miles and at its close 9,014 miles, showing a net increase for the triennial period of 711·71 miles, as compared with a net increase of 792·40 miles during the previous triennial period.

2. The total length of roads suitable for planting up with avenues is 14,945·30 miles, of which 60·3 per cent. was planted up at the end of the period, as compared with 57·1 per cent. of the total length of roads planted up at the end of the previous triennial period.

3. The progress and changes in each district are given in the appended statement No. IV (a). From a perusal of this statement it will be seen that the net increase for the period is made up as follows :—

Additions.

			Miles.
Corrections of previous figures	...	...	19·35
Successfully planted	...	...	958·98
Transferred from other management	...	...	150·75
Other causes	...	...	1·44
		Total	1,130·52

Deductions.

Corrections of previous figures	...	...	17·49
Failures	...	...	246·29
Felled	...	...	87·88
Transferred to other management	...	...	19·33
Other causes	...	...	48·02
		Total	418·81

4. All districts show that the length of avenues successfully planted exceeded the length of failures. It is satisfactory to note that in several districts in which considerable lengths of avenues were planted there were no failures recorded, *e. g.*, Rawalpindi (60 miles) ; Kangra (39 miles) ; Lahore (19 miles) ; Montgomery (17 miles) ; Rohtak (13 miles) ; Hissar (13 miles) ; Jullundur (7 miles) ; Attock (4 miles) ; Karnal (4 miles).

5. In the following districts and municipalities no planting of avenue operations were carried out ;—

Mianwali, Gurgaon and Gurdaspur districts, and the Jhang, Karnal, Amritsar, Delhi and Rawalpindi Municipalities.

6. The Shahpur Municipality with a total length of 16·88 miles suitable for avenues is the only district which shows all its roads completely planted up with avenues.

7. For the purpose of the arboricultural returns the districts are classified into four groups :—

- (i) *Arid districts*,—including Muzaffargarh, Multan, Dera Ghazi Khan, Mianwali, Montgomery, Jhang, Lyallpur, Shahpur, Hissar.
- (ii) *Very dry districts*,—comprising Ferozepore, Rohtak, Lahore, Karnal.
- (iii) *Dry districts*,—comprising Jhelum, Gujranwala, Gurgaon, Amritsar, Delhi, Jullundur, Ludhiana, Rawalpindi, Attock.
- (iv) *Fairly moist districts*,—comprising Gujrat, Gurdaspur, Ambala, Sialkot, Hoshiarpur, Simla, Kangra.

An examination of the results in the above groups of districts gives the following figures for the period :—

Arid districts.—374·49 miles successfully planted and 91·77 miles of failures, but of 4,578·91 miles of roads suitable for planting, 2,309·06 miles were under avenues at the close of the period while 2,269·85 miles remained unplanted.

Very dry districts.—74·80 miles successfully planted and 16·50 miles of failures, but of 2,382·41 miles of roads suitable for planting, 1,394·66 miles were under avenues at the close of the period while 987·75 miles remained unplanted.

Dry districts.—230·02 miles successfully planted and 87·64 miles of failures, but of 4,479·27 miles of roads suitable for planting, 2,318·18 were under avenues at the close of the period while 2,161·09 miles remained unplanted.

Fairly moist districts.—279·67 miles successfully planted and 50·38 miles of failures, but of 3,504·71 miles of roads suitable for planting, 2,992·10 miles were under avenues at the close of the period while 512·61 miles remained unplanted.

8. At the commencement of the triennial period the area under groves was 4,823·31 acres and at the close of the period 4,877·09 acres, showing an increase of 53·78 acres, whereas during the previous triennial period there was a decrease of 12·26 acres.

The changes which have occurred in each district are shown in statement III (a) appended to this report.

The increase of 53·78 acres is made up as follows :—

<i>Additions.</i>				Acres.
Correction of figures	...	...	...	2·00
Successfully planted	...	...	...	43·45
Transfers from other heads	...	...	...	22·15
Transfers from other management	...	...	...	46·59
Other causes	...	...	...	8·45
Total				122·64
<i>Deductions.</i>				
Correction of figures	...	...	...	0·00
Failures	...	...	...	10·14
Transfers to other heads	...	...	...	2·17
Transfers to other management	...	...	...	24·31
Other causes	...	...	...	32·24
Total				68·86

From these figures it will be seen that the actual area successfully planted was 43·45 acres, and the failures amounted to 10·14 acres, whereas

during the previous triennial period 33·30 acres were successfully planted and 14·78 acres failed.

The districts in which groves were successfully planted are the following :—

Muzaffargarh (9·51 acres), Mianwali (12·20 acres), Hissar (1·25 acres),
Jhelum (13·64 acres), Amritsar (0·35 acre), Delhi (5·32 acres),
Attock Municipality (1·18 acres).

9. At the commencement of the triennial period there were 1,879·84
acres under plantations and at its close
1,811·84 acres, showing a net decrease
of 68·00 acres.

Details of the operations in each district are shown in statement II (a)
appended to this report.

The decrease of 68 acres is made up as follows :—

<i>Additions.</i>				Acres.
c				
Successfully sown or planted ...	...	...	...	39·75
Transferred from nurseries and groves ...	...	...	...	8·46
Transferred from other management ...	...	...	...	6·25
Total				54·46
<i>Deductions.</i>				
Corrections of previous figures ...	...	...	...	63·00
Failures ...	...	...	...	1·96
Transferred to other management ...	...	...	...	20·00
Other causes (<i>i. e.</i> , sold) ...	...	...	...	37·50
Total				122·46

These figures show that the actual area stocked with plantations was 39·75 acres and the area which failed was 1·96 acres. The total decrease during the year of 68 acres is due mainly to the correction of previous figures and to sales.

The districts in which successful plantations were established are the following :—

Ferozepore (13·80 acres), Lahore Municipality (1·03 acre), Delhi
(12·30 acres), Jullundur (8·62 acres) and Sialkot (4 acres).

10. At the commencement of the period the area under nurseries was 265·23 acres and at its close 278·16
acres, showing a net increase of 12·93
acres which is made up as follows :—

<i>Additions.</i>				Acres.
Extension of nurseries ...	...	...	...	62·74
Other causes ...	...	...	...	0·70
Total				63·44
<i>Deductions.</i>				
Failures ...	...	...	...	7·59
Transfer to groves or plantations ...	...	...	...	30·87
Other causes ...	...	...	...	12·05
Total				50·51

The actual area brought under nurseries was 62·74 acres, and the area which failed was 7·59 acres.

The proposal to irrigate the garden in Ludhiana from the Sirhind Canal mentioned in the last report has led to nothing as yet, but the idea has not been abandoned.

(b) — DETAILS OF THE WORK DONE.

Arid Districts.

11. *Muzaffargarh*.—The length of avenues was increased by 38·70 miles during the period, and in addition 12,384 trees were planted in gaps. The total value of the road-side trees in the district is put at Rs. 3,89,725, being estimated at Rs. 7 per tree.

Multan.—The length of avenues was increased during the triennial period by 80·98 miles. The standing timber in the district has been valued at Rs. 1,23,135, but no details have been given to show how the calculation was made.

Dera Ghazi Khan.—15·35 miles of avenues were planted during the period, of which 10·35 failed and 2 miles were deducted, the trees being sold on account of river erosion. No new plantation or groves were made, but 60 acres were deducted from the former by correction of the previous figures and 10 acres from the latter by failure. Camels do great damage to young trees planted in new avenues or gaps; and goats, drought and floods contribute to the difficulties of establishing trees.

Mianwali.—The avenues decreased by 15 miles owing to the transfer of the Leiah Tahsil to the Muzaffargarh District. The remaining avenues were maintained and gaps in them filled up.

Groves lost 10 acres owing to the detachment of the Leiah Tahsil, but this was more than counterbalanced by a net increase of 12·21 acres in the rest of the district. The three districts—Shahpur, Attock and Mianwali—have started a joint garden at Sakesar under the care of the Deputy Commissioner, Mianwali. Shrubs and trees obtained from the Government Agri-Horticultural Gardens, Lahore, have been planted out and are doing well, as also are young chil and eucalyptus raised from seed. The standing trees in the district have been valued at Rs. 91,000.

Montgomery.—The avenues were increased by 17·50 miles during the period: nothing had to be deducted on account of failures. Work in the district is confined to areas with perennial irrigation which doubtless largely accounts for the success of the planting. The standing timber in the district has been valued at Rs. 33,050.

Jhang.—38 miles of avenues were newly planted during the period, of which 15 miles have failed. The planting of trees is being extended to District Board schools, dispensaries and rest-houses. In all chaks on the Chenab Canal there are nurseries maintained by the villagers from which the District Board obtains the trees they require.

Lyallpur.—The avenues were increased by 118·50 miles during the period under report: 42·50 miles were deducted as having failed. The length of roads shown as fully stocked at the close of the period is 663·50 miles, which is more than any other district in the province. The Deputy Commissioner reports that the financial position of the Board does not allow of any further extension, which is unfortunate, as 438 miles of road are still shown as suitable for avenues. During the last 6 years 434·25 miles of avenues have been established, and the protection and the tending of so many young trees must necessarily cost large sums of money until the trees have grown large enough to take care of themselves. The maintenance charges will presumably fall off as time passes, and thus funds will gradually become available for extension of the work. It is to be hoped, however, that some means will be found of obtaining more money temporarily so that the extensions may not be delayed till the maintenance charges have fallen sufficiently to enable them to be carried out. The income from arboriculture has increased since the last triennial report from Rs. 699 to Rs. 5,680. The standing timber belonging to the District Board has been valued at Rs. 37,250, this figure being obtained by assuming that trees over 10 years of age have an average value of Rs. 5, the value of trees under 10 years old being neglected.

Shahpur.—68·75 miles of avenues were successfully established during the period under report and 5·75 miles failed. Groves show a net increase of 4·00 acres, and nurseries increased by 4·75 acres.

Hissar.—13 miles of avenues were successfully established during the period; there were no deductions on account of failure. The standing timber in the district has been valued at Rs. 2,61,520, excluding trees belonging to municipalities which have been valued at Rs. 12,120. The value has been ascertained by enumerating the trees under sissu, nim, kikar, pipal, tamarisk and other kinds. The trees under each of the above heads are again divided into "under 6 years old," "medium" and "large". An average rate is then assumed for each class and thus the total value of the crop is ascertained.

Very Dry Districts.

Ferozepore.—25·50 miles of avenues were successfully planted during the period, but 16·20 failed. 13·8 acres were added to plantations and 0·8 acre excluded as having failed. There is no change to record in the areas under groves and nurseries.

Rohtak.—13·50 miles of avenues were planted during the period, nothing being deducted on account of failure. 10,128 trees were planted and 3,891 died, the figures for the previous triennium being 6,825 and 2,369, respectively. The higher death rate is attributed to scanty water-supply and frost.

The trees belonging to the District Board have been valued at Rs. 42,285, but it is not known how this figure has been obtained.

Lahore.—The avenues under the District Board increased during the period by 68·75 miles, of which 19·25 miles were newly planted and 49·50 miles were received from the Public Works Department; 3·62 acres of nursery were added during the year. Tree-planting within the Municipal limits of Lahore has been very successful. Of 3,362 trees planted during the period only 261 died, and of these no less than 178 were killed by the severe frosts in December 1910. The trees planted were chiefly sissu, *Terminalia arjuna* and pipal.

Karnal.—The length of avenues was increased by 4·0 miles during the period under report, this being the new work done during the period. In addition gaps were filled in avenues previously planted. 6,793 trees were planted and 2,877 trees died or were blown down during the period. The plants required for road-side planting are all obtained from a central nursery at Karnal, 2·27 acres in area, the small nursery 0·65 acres at Kaithal being abandoned. The standing timber in the district has been valued at Rs. 1,89,325, sissu being valued at Rs. 6 each, kikar at Rs. 3 and other kinds at Rs. 2 each. Small trees have apparently been omitted in the valuation as the total value is based on 55,103 trees, whereas the number of trees in the district at the close of the period under report is given as 63,496.

Jhelum.—9·21 miles of avenues were planted during the period under report by the District Board, of which 5·93 miles failed. During the same period the Jhelum Municipality planted 10·0 miles of avenue, of which 4·0 miles failed. The trees planted amounted to 4,962, of which 3,580 failed. The high proportion of failure is ascribed to arid climate, frost and white ants. The Commissioner, Rawalpindi division, remarks—"It is apparent that there has been considerable waste of effort in connection with road-side planting of trees in this district. Failures on the scale indicated should not be recognised as inevitable. It would be better to concentrate efforts on shorter lengths of road."

13·64 acres of groves were successfully planted and 3·5 acres were sold: no deductions had to be made on account of failures. The value of the standing timber has been roughly estimated at Rs. 2,80,000.

Gujranwala.—32·75 miles of road were planted with avenues during the 3 years period, of which 11·10 miles failed. A working plan for road-side tree-planting has been drawn up under which work is concentrated on Khangah Dogran and Hafizabad Tahsils as in this part of the district water from the Lower Chenab Canal is available.

The demand for the fruit of the Malta orange trees in the garden at Gujranwala known as the "Company Bagh" is keener than ever and the price paid for the fruit is still rising. The 100 Malta orange trees supplied by the Director of Agriculture, Punjab, in 1905 continue to do well and bear fruit of excellent quality. The trees belonging to the District Board have been valued, except for the Sharakpur Tahsil, recently transferred from Lahore District. In the 4 old tahsils of the district the trees are estimated to be worth Rs. 1,30,007.

Gurgaon.—0·19 acre of nursery were established during the period and 0·80 acre were given up. No new work has been done under avenues, groves or plantations, but gaps in existing avenues were filled up as required, 21,379 trees being utilized for this purpose.

Amritsar.—Avenues were planted along 90·34 miles of road, of which 61·14 miles failed; along 15·63 miles of road the trees died and were felled: thus making a net addition of 13·57 miles of avenue. The large proportion of failure is attributed to excessive rain and frost.

The standing timber belonging to the District Board has been valued at Rs. 3,50,000 and that belonging to the Municipality at Rs. 98,000. No details have been given to show how the estimate was made.

Delhi.—Numerous additions and deductions were made to the length of avenues in the district resulting in a net decrease of 10·41 miles. 12,985 plants were planted in avenues, of which 4,877 or 38 per cent. died, 5·32 acres of groves were successfully planted and no areas had to be excluded from groves on account of failure. The area of plantations was increased by 12·30 acres by fresh planting and decreased by 1·00 acre by correction of the previous figures. Efforts are being made to get all the bunds in the district under plantations; kikar and jhund are being sown with this object. The road-side trees belonging to the District Board have been valued at Rs. 83,880.

Delhi Municipality.—The only work of importance undertaken during the period is the reafforestation of the Ridge. The soil in suitable places is loosened with a crowbar and sown with seeds of shade trees at the beginning of the monsoon. The success of the work so far is promising as seedlings which germinated in the rains of 1909 survived until the rains of 1910 in spite of an exceptionally severe hot weather. The Superintendent of Gardens, Delhi, reports that the new iron tree-guards have proved satisfactory, the trees making better growth and deaths being far less frequent than when the old brick guards were in use.

Jullundur.—The length of avenues was increased by planting up 7·50 miles of road: no deductions were made during the period. The area of groves decreased by 16·58 acres owing to the transfer of certain buildings to which they were attached to the Provincial Branch. During the period 8·62 acres of plantation was successfully established and 20·70 acres were sold and not replanted owing to river action. The appointment of a retired Subedar as Inspector of Arboriculture on the 1st June 1907 has proved a success and the Deputy Commissioner attributes the increase in revenue to his careful supervision. The standing timber is estimated to be worth Rs. 3,73,525.

Ludhiana.—5 miles of avenues were planted during the triennium, of which 2 miles failed. The failure is attributed chiefly to damage by white-ants. 13,284 plants were used in filling gaps. The distribution of plants and

seed to villagers has met with no success as the people will not give the necessary attention to the young plants. 1·05 acres of nursery were established on roadsides and were doing well at first; cattle, however, broke into the nurseries and did great damage, 51 acre being completely destroyed. The trees on roadsides in the district have been estimated to be worth Rs. 1,65,849.

Rawalpindi.—60·00 miles of avenues were planted during the period; 12·00 miles were excluded as the trees died and were sold. Three public gardens are maintained at Chhattar, Rawalpindi and Kahuta for the propagation of fruit trees and flowers.

Attock.—4·60 miles of avenues were planted during the triennium and 5·50 miles were received by transfer from the Public Works Department. The decrease amounted to 4·25 miles felled in the Attock Tahsil. Arboricultural work in the district is hampered by lack of water which often has to be carried long distances owing to the scarcity of wells.

Fairly moist Districts.

Gujrat.—The length of avenues was increased by 80·16 miles by planting new avenues. A total decrease of 16·78 miles occurred during the period, of which 8·90 miles is due to failure. Considering the large amount of work done in the district the proportion of failures is low. The net gain to the length of avenues in the district amounts to 63·38 miles, leaving only 28·09 miles of road in the district shown as suitable for planting which has not been planted up. The timber in the district belonging to the District Board has been roughly valued at Rs. 12,50,000, whereas that belonging to Municipalities has been estimated to be worth Rs. 22,288.

Gurdaspur.—The length of avenues remains unchanged, but gaps have been filled up as required, special attention being paid to the extension of the mulberry with a view to its being used for the silk industry. The only plantation in the district, 13·80 acres in area, was written off on its being transferred to the Government experimental farm. The areas under nursery increased by 5·60 acres owing to the establishment of 4 new nurseries for raising mulberry plants for the silk industry.

Ambala.—The avenues were increased by 46·47 miles of new planting and 4·60 miles by correction of the previous figures during the period under report. 6 miles were written off as failure during the same period. 12,944 plants were planted out along roadsides, of which 1,944 died. The appointment of a special arboricultural darogha has not been found satisfactory and the supervision is now managed by the Tahsildars.

Sialkot.—The length of avenues increased by 100·25 miles owing to fresh planting and 17·17 miles by transfer from Lyallpur Provincial Division during the period under report. The decreases during the same period amounted to 31·63 miles owing to failure, and 20·00 miles were felled. The large amount of failure is attributed to frost, while storms and floods are responsible for the 20·00 miles felled. The timber belonging to the District Board has been valued at Rs. 21,63,546.

Hoshiarpur.—The length of avenues was increased by 12·25 miles by new planting and decreased by 3·00 owing to failures during the 3 years under report. The failure is attributed to bad supervision by the darogha, of which there were two in the district. Both these men, however, have been discharged as unnecessary. The standing timber in the district has been valued at Rs. 9,62,082.

Simla.—The work consists of the maintenance of the Mahasu orchards and nursery. There are 3,341 fruit trees and 1,449 forest trees at Mahasu, and their value has been estimated to be Rs. 10,000.

Kangra.—During the period under report 39·02 miles of avenue were planted and 8·63 miles failed. The trees in 8·63 miles being dead were felled and sold. 271 fruit trees were received from the Agri-Horticultural Gardens, Lahore, and 110 from the Director of Agriculture. Of the latter 44 were planted in public gardens and 66 were distributed to private persons.

(c)—FINANCIAL RESULTS.

12. The gross revenue from arboriculture during the triennial period under report was Rs. 7,69,288, or Rs. 1,29,750 in excess of that of the previous triennial period, while the expenditure was Rs. 11,62,427 or Rs. 2,06,081 in excess of the expenditure during the previous period.

For the period under report the deficit amounted to Rs. 3,93,139 as compared with a deficit of Rs. 3,16,808 during the previous triennial period.

The highest gross revenue was realised in the Sialkot District with Rs. 1,09,358. The other districts which show a gross revenue exceeding Rs. 30,000 are Shahpur, Rawalpindi Municipality, Amritsar Municipality, Jullundur, Gujrat, Gurdaspur and Hoshiarpur.

The following districts and municipalities show a surplus on their arboricultural operations :—

Shahpur Municipality, Jullundur, Rawalpindi District and Municipality, Gujrat, Gurdaspur, Sialkot District and Municipality, Hoshiarpur and Simla.

B.—Canal Arboriculture.

13. The length of roads and canals suitable for avenues under the Irrigation Department increased during the period under report from 8,773·14 to 9,101·88. The total additions to the length of avenues as given in the appended statement No. IV (b) were—

				Miles.
Correction of figures	...	...	...	234·18
Successfully planted	...	...	...	789·80
Transferred from other management	...	...	...	33·20
Other causes	...	...	...	10·40
Total				1,067·58

The length of 789·80 miles successfully planted does not compare favourably with the 1,443·16 miles successfully planted during the previous triennium. The largest amount of successful planting was done in the following divisions :—

Multan, Dera Ghazi Khan, Muzaffargarh, Lower Gugera, Burala, Lower Jhelum Canal, 1st and 2nd Divisions.

14. The total deductions as shown in the statement are due to—

				Miles.
Correction of figures	...	...	...	421·72
Failures	...	...	...	219·82
Felled	...	...	...	35·49
Transferred to other management	...	...	...	26·20
Other causes	...	...	...	58·37
Total				761·60

The failures amounted to 219·82 miles against 537·05 miles in the previous period. The percentage of failures amounted to 27·83 against 37·21 in the previous period. This reduction in the proportion of failures is satisfactory.

Of the length of avenues deducted by correction of the previous record 402·8 miles occurred in the 2nd Division, Lower Jhelum Canal. This error crept into the form apparently owing to avenues being shown as successfully

planted before this was actually the case. Gaps formed and were filled up, their length not being shown under "failures", whereas the new work was again entered as "successfully planted." Some of the "avenues" in the division were found to contain only scattered trees, and these have now been struck off the form.

15. There are no groves under the Irrigation Department.

16. The additions to the areas under plantations belonging to the Irrigation Department during the three years 1908-09 to 1910-11 are as follows (*vide* statement No. II (b)) :—

				Acres.
Correction of area	...	...	...	220.73
Successfully sown or planted	...	...	...	2,240.45
Transferred from other heads	...	...	...	13.53
Transferred from other managements	...	...	...	108.44
Total				2,583.15

The above figure of 2,240.45 acres planted shows a considerable decrease on the 3,067.80 acres planted in the previous triennium.

17. The exclusions were as follows :—

				Acres.
Correction of areas	...	...	...	221.62
Failures	...	...	...	712.09
Transferred to other management	...	...	...	63.83
Transferred to other heads	...	...	...	116.22
Other causes	...	...	...	181.00
Total				1,294.76

712.09 acres failed against 783.80 acres in the previous period which works out at 31.78 per cent. against 25.54 per cent. of failure in the previous period. It will be observed that although the area planted or sown is considerably below that of the previous period, the proportion which failed has increased. A large proportion of failures are attributed to bad soil, thus in the 1st Division, Lower Jhelum Canal, 75.75 acres of kikar sowing failed owing to salts in the soil, and it is proposed to try farash in future on this area. Farash could doubtless be grown in many places in other divisions with similar salt lands not suitable for kikar.

18. The area under nurseries increased from 41.70 to 74.86 acres. The increase occurred chiefly in the Dera Ghazi Khan Division.

19. The income during the period under review amounted to Rs. 3,81,747 against Rs. 3,91,189 in the previous period. The corresponding figures for expenditure are Rs. 7,86,190 and Rs. 7,09,445 in the two periods respectively. The deficit has thus risen from Rs. 3,18,256 to Rs. 4,04,443. The following divisions show a surplus on their arboricultural operations during the period :—

Upper Bari Doab Canal, 3rd Division, Western Jumna Canal, Delhi and Hissar Divisions, Sirhind Canal all divisions.

Most of the remaining divisions being on new or comparatively recent canals cannot be expected to show any surplus for many years.

C.—Arboriculture in Provincial Divisions (Public Works Department).

20. The following abstract from statement No. IVc shows the additions made to the length of avenues during the period :—

				Acres.
Correction of figures	...	...	...	5.92
Successfully planted	...	...	...	80.80
Transferred from other management	...	...	...	41.84
Other causes	...	...	...	3.04
Total				131.60

The deductions during the same period were—

				Acres.
Correction of figures	...	...	...	859.11
Failures	...	...	...	10.52
Felled	...	...	...	6.41
Transferred to other management	...	...	...	47.21
Other causes	...	...	...	2.33
Total				425.58

The length of new avenues planted during the period amounts to 80.80 miles against 145.62 miles in the previous period, whereas failures amounted to 13.02 per cent. during the period under report against 19.25 per cent. in the previous period.

The large decrease in the total length of avenues due to the correction of figures occurred chiefly in the Ambala Provincial Division. The mistake in the figures was discovered by measuring the length of avenues as they exist on the ground.

21. Statement No. IIIc gives the details of the changes under the head groves.

22. Statement No. IIc gives similar information for plantations.

23. The area under nurseries decreased from 45.08 acres to 30.95 acres : full details and reasons for the changes may be seen in Statement No. Ic.

24. The revenue of the period under report amounted to Rs. 92,158 and the expenditure to Rs. 96,993, thus showing a loss of Rs. 4,835 as compared with a surplus of Rs. 21,127 in the previous triennium. The increase in expenditure from Rs. 74,677 to Rs. 96,993 is responsible for the deficit on arboricultural operations in Provincial Divisions. More money has been spent on maintenance of existing groves and avenues and on establishment, these latter charges having increased from Rs. 2,726 to Rs. 15,923. Jullundur, Lyallpur and Ambala are the only divisions which have worked with a surplus. In comparing the figures for the various Provincial Divisions it should be noted that Gujranwala Division is not now shown as it has been included in Lyallpur. Similarly Ferozepore Division is now included in Lahore No. II.

25. The value of the standing timber in Provincial Divisions is estimated as follows :—

				Rs.
Rawalpindi Division	...	...	...	Not estimated.
Kangra	„	...	...	52,712
Lyallpur	„	...	...	74,000
Jullundur	„	...	...	3,20,376
Multan	„	...	...	89,894
Shahpur	„	...	...	Nil.
Delhi	„	...	...	70,763
Simla	„	...	...	Nil.
Lahore No. I	„	...	...	1,30,496
Lahore No. II	„	...	...	57,708
Ambala	„	...	...	2,59,782

GENERAL REMARKS.

26. The following table exhibits the extensions by planting and the failures in avenues, groves and plantations under the management of the District

Boards, the Irrigation Department and the Provincial Divisions, and compares them with those of the previous period :—

				1908-09 to 1910-11.		1905-06 to 1907-08.	
				Planted.	Failed.	Planted.	Failed.
Avenues (miles)	...	...	...	1,775.07	476.63	2,737.02	787.72
Groves (acres)	...	...	...	43.45	16.00	34.49	15.28
Plantations (acres)	...	...	...	2,280.20	714.05	3,130.46	807.73

The ratio of failures to extensions during the period under report is as follows :—

Avenues—26.85 per cent. as compared with 28.78 per cent. for the previous period.

Groves—36.82 per cent. as compared with 44.30 per cent. for the previous period.

Plantations—31.32 per cent. as compared with 25.80 per cent. for the previous period.

Except in the case of groves, which is a very small item, the amount of work done does not compare well with that done in the previous period, and seeing that establishment charges have increased by Rs. 1,06,255 during the triennium better results should have been attained. It should, however, be noted that charges on maintenance of existing avenues have increased by Rs. 1,98,197, and this branch of the work which does not show up in the forms appears to have received due attention.

27. In accordance with paragraph 6 of the Punjab Government's review on the Arboriculture report for the triennial period 1905-06 to 1907-08, an attempt has been made in this report to give a valuation of the standing timber. Many districts have given valuations of their timber, as shown in the statement at page 13, but others have not done so owing to the difficulty they have experienced in arriving at a satisfactory method for making the valuations. The Conservator has been in correspondence on this subject with the Chief Engineer, Irrigation Department, and it is hoped that it will be possible to give a complete valuation of the standing timber in the next triennial report.

28. In accordance with paragraph 4 of Punjab Government's review referred to above, a statement has been added at the end of the report, on page 12, showing the names of the districts for which programmes of arboricultural operations have been drawn up. Generally speaking, these programmes have been more or less carried out as far as practicable.

29. The revenue from all sources was Rs. 12,43,193 and the total expenditure amounted to Rs. 20,45,610, showing a deficit of Rs. 8,02,417 for the triennial period, or an average of Rs. 2,67,472 per annum, while in the previous period the revenue was Rs. 11,26,531, the expenditure Rs. 17,40,468 and the deficit Rs. 6,13,937.

The deficit for the triennial period under report is made up as follows :—

				Rs.
District Boards ...	...	...	...	3,93,139
Canal Department	...	...	...	4,04,443
Provincial Divisions	...	...	...	4,835

Statement showing the names of the Districts for which plans of Arboriculture Operations have been drawn up.

Name of district.	Period for which the plan of arboriculture operations is sanctioned.	Result.
Hissar ...	1909 to 1912 ...	The plan proposed 16½ miles of avenues to be planted during the triennium, against which 13·15 miles were planted.
Rohtak ...	1909-10 to 1913-14 ...	The programme for 1908-09 and 1909-10 prescribed the planting of 5,550 trees, which was fully carried out.
Gurgaon ...	1909-10 to 1911-12 ...	The programme for 1909-10 prescribed 4,125 trees, whereas 5,806 were planted.
Delhi ...	1905-06 to 1909-10 ...	The plan prescribed 30½ miles of avenues to be planted, of which 19¾ miles were actually planted.
Karnal ...	1910-11 to 1912-13 ...	Carried out as far as possible.
Ambala ...	1910-11 to 1912-13 ...	Carried out as far as circumstances allowed.
Kangra ...	1910-11 to 1912-13 ...	No accurate comparison is possible as the old plan does not mention the length of road to be planted. The current plan proposed 77 miles for planting in 1910-11, whereas 39 miles were planted in the triennium.
Hoshiarpur ...	1908-09 to 1910-11 ...	Carried out as far as possible.
Ferozepore ...	1909-10 to 1911-12 ...	The plan proposed planting 101¾ miles of avenues and 30 acres of plantation, against which 25½ miles of avenues and 13·8 acres of plantation were made.
Gurdaspur ...	1907 to 1909 ...	Plan expired in 1909, since when no plan is in force.
Sialkot ...	1909-10 to 1911-12 ...	The plan proposed planting 8 miles of new avenue in 1909-10 and more in 1910-11. 100·75 miles were actually planted during the triennium.
Gujrat ...	1909-10 to 1912-13 ...	Under the plan it was proposed to plant 137½ miles of avenues, whereas 81·18 miles were actually planted during the triennium.
Jhelum ...	1909-10 to 1913-14 ...	The plan proposed planting 12 miles of avenues, against which 9·21 miles were planted.
Rawalpindi ...	1909-10 to 1913-14 ...	The plan has been worked up to except in the Rawalpindi Tahsil, where no nurseries were established. The work proposed consisted of filling up gaps, and gaps equivalent to 60 miles of avenue were planted in Kahuta Tahsil.
Shahpur ...	1909-10 to 1913-14 ...	The plan proposed planting 75½ miles of avenues during the years 1909-10 and 1910-11. 68¾ miles were actually planted during the triennium.
Lyallpur ...	1909-10 to 1910-11 ...	The plan proposed planting 147 miles of avenues during the years 1909-10 and 1910-11. In 1909-10 45½ miles were planted, nothing being done in 1910-11 for want of funds.
Jhang ...	1908-09 to 1910-11 ...	The plan proposed planting 51 miles of avenues, against which 38 miles were actually planted during the triennium.
Multan ...	1908-09 to 1910-11 ...	It is not possible to compare the work done with what had been proposed in the plan as the plan does not give details as to the lengths of roads to be planted.
Muzaffargarh ...	1910-11 to 1912-13 ...	Note as for Multan.
Montgomery ...	1909-10 to 1913-14 ...	The plan proposed planting 10 miles of avenues during the years 1909-10 and 1910-11, against which 13½ miles were actually planted.

Statement showing the Valuation of Standing Timber in each District.

Name of District.						Value of standing timber.
						Rs.
Muzaffargarh	...	...	...	...	...	3,89,725
Multan	...	...	...	...	...	1,23,135
Mianwali ^e	...	...	...	...	...	91,000
Montgomery	...	...	...	...	...	33,050
Lyalpur	...	...	...	...	...	37,250
Hissar	...	...	...	...	...	2,61,520
Hissar Municipality	...	...	...	...	...	12,120
Rohtak	...	...	...	...	...	42,285
Lahore Minor Municipalities	...	...	...	...	...	20,606
Karnal	...	...	...	...	...	1,89,325
Jhelum	...	...	...	...	...	2,80,000
Gujranwala	...	...	...	...	...	1,30,007
Amritsar	...	...	...	...	...	3,50,000
Amritsar Municipality	...	...	...	...	...	98,000
Delhi	...	...	...	...	...	83,880
Jullundur	...	...	...	...	...	3,73,525
Ludhiana	...	...	...	...	...	1,65,849
Gujrat	...	...	...	...	...	12,50,000
Gujrat Municipality	...	...	...	...	...	22,288
Sialkote	...	...	...	...	...	21,63,546
Hoshiarpur	...	...	...	...	...	9,62,082
Simla	...	...	...	...	...	10,000
TOTAL						70,89,193

STATEMENTS.

STATEMENT No. I (a).

PROGRESS STATEMENT OF NURSERIES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3					4					5	6
DISTRICT.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
		Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.		
ARID DISTRICTS.													
Muzaffargarh ...	...	...	0.75	...	(a) 0.40	1.15	...	...	...	(b) 0.40	0.40	0.75	(a) Transferred from the Mianwali district.
Multan ...	0.76	...	0.94	...	...	0.94	...	0.26	...	(b) 0.30	0.56	1.14	
Dera Ghazi Khan...	0.12	...	0.07	...	...	0.07	...	...	...	(c) ...	...	0.19	(b) Transplanted to avenues.
Mianwali ...	2.75	...	...	...	...	...	...	...	...	0.40	0.40	2.35	
Montgomery ...	0.57	...	0.80	...	...	0.80	...	1.25	...	...	1.25	0.12	(c) Transferred to Muzaffargarh district.
Jhang ...	1.75	...	...	...	...	...	...	0.50	...	...	0.50	1.25	
Jhang Municipality	0.01	...	...	...	...	...	...	...	...	...	...	0.01	
Lyallpur ...	...	...	22.02	...	...	22.02	...	...	(d) 17.50	...	17.50	4.52	(d) To groves.
Shahpur ...	11.40	...	10.25	...	...	10.25	...	1.50	(d) 4.00	...	5.50	16.15	(e) To plantations.
Hissar ...	128.14	...	...	...	...	...	...	...	...	...	...	128.14	(f) Given up during the period.
Hissar Municipality	...	...	...	...	...	...	...	...	...	...	...	...	
Total Arid Districts	145.50	...	34.83	...	0.40	35.23	...	3.51	21.50	1.10	26.11	154.62	(g) Destroyed by white ants.
VERY DRY DISTRICTS.													
Ferozepur ...	0.50	...	...	...	...	...	...	...	(d) ...	...	...	0.50	(h) Trees grew too big for transplantation: hence this area deducted.
Rohtak ...	4.15	...	...	...	...	...	...	...	0.14	...	0.14	4.01	
Lahore ...	11.54	...	3.62	...	...	3.62	...	...	...	...	...	15.16	
Lahore Municipality	1.44	...	0.25	...	...	0.25	...	...	...	...	...	1.69	(i) Transferred from Lyallpur Provincial Division.
Karnal ...	2.92	...	...	...	...	...	...	0.65	...	...	0.65	2.27	
Total Very Dry Districts.	20.55	...	3.87	...	...	3.87	...	0.65	0.14	...	0.79	23.63	
DRY DISTRICTS.													
Jhelum ...	0.15	...	0.05	...	...	0.05	...	0.02	...	(e) ...	...	0.02	0.18
Gujranwala ...	6.35	...	2.36	...	...	2.36	...	...	(f) 3.50	3.36	6.86	1.85	
Gurgaon ...	1.66	...	0.19	...	...	0.19	...	...	...	0.80	0.80	1.05	
Amritsar ...	22.17	...	...	...	...	...	...	1.24	...	(b) 1.43	2.67	19.50	
Amritsar Municipality.	7.34	...	...	...	...	...	...	...	...	(f) ...	...	7.34	
Delhi ...	1.17	...	0.64	...	...	0.64	...	...	...	(f) 0.50	0.50	1.31	
Delhi Municipality	0.70	...	...	...	...	...	...	...	...	...	...	0.70	
Jullundur ...	6.26	...	0.38	...	...	0.38	...	...	...	...	...	6.64	
Ludhiana ...	2.06	...	1.05	...	...	1.05	...	0.51	...	...	0.51	2.60	
Rawalpindi ...	4.03	...	0.71	...	...	0.71	...	...	...	(b) 0.72	0.72	4.02	
Rawalpindi Municipality.	1.71	...	2.00	...	...	2.00	...	0.50	(d) 0.50	(g) 0.71	1.71	2.00	
Attock ...	4.11	...	0.19	...	...	0.19	...	...	0.26	...	0.26	4.04	
Attock Municipality	0.01	...	...	...	...	...	...	...	...	...	...	0.01	
Total Dry Districts	57.72	...	7.57	...	...	7.57	...	2.27	4.26	7.52	14.05	51.24	
FAIRLY MOIST OR FOREST DISTRICTS.													
Gujrat ...	12.83	...	1.00	...	...	1.00	...	...	...	(h) 2.74	2.74	11.09	
Gurdaspur ...	2.21	...	5.60	...	...	5.60	...	...	...	(d) ...	...	7.81	
Ambala ...	2.50	...	3.07	...	(i) ...	3.07	...	0.16	(e) 0.01	(f) 0.48	0.65	4.92	
Sialkot ...	9.93	...	3.80	...	0.30	4.10	...	0.79	4.96	...	5.75	8.28	
Sialkot Municipality	0.07	...	0.01	...	...	0.01	...	0.01	...	...	0.01	0.07	
Hoshiarpur ...	2.60	...	0.60	...	...	0.60	...	0.20	...	...	0.20	3.00	
Simla ...	3.27	...	...	...	...	...	...	...	...	...	...	3.27	
Kangra ...	8.05	...	2.39	...	...	2.39	...	...	...	(b) 0.21	0.21	10.23	
Total Forest Districts	41.46	...	16.47	...	0.30	16.77	...	1.16	4.97	3.43	9.56	48.67	
Total for 1908-09 to 1910-11.	*265.23	...	62.74	...	0.70	63.44	...	7.59	30.87	12.05	50.51	278.16	
Total for 1905-06 to 1907-08.	262.17	...	...	...	...	99.07	...	...	...	...	85.29	275.95	

*The Kangra Municipal Forests having been handed over to the Forest Department for management, 10.72 acres being the area of nurseries have been excluded from the opening balance of the statement.

STATEMENT No. I (b).

PROGRESS STATEMENT OF NURSERIES IN THE CANALS DIVISIONS
FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3					4					5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
		<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	<i>Acre and decimals.</i>	
Upper Bari Doab Canal, 1st Division.	...	...	1.00	...	...	1.00	...	...	...	...	...	1.00	
Upper Bari Doab Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Bari Doab Canal, 3rd Division.	3.61	...	...	1.11	...	1.11	...	...	(a) 3.61	...	3.61	1.11	
Upper Sutlej Division, Inundation Canals.	...	...	1.13	...	...	1.13	...	...	0.11	...	0.11	1.02	
Central Workshop Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Bari Doab Canal, 1st Division.	...	...	1.03	...	...	1.03	...	0.13	...	(d) 0.30	0.43	0.60	
Lower Bari Doab Canal, 2nd Division.	...	...	2.70	...	...	2.70	...	...	...	...	...	2.70	
Lower Bari Doab Canal, 3rd Division.	...	...	0.04	...	...	0.04	...	...	...	...	...	0.04	
Sutlej Survey Division	...	...	...	...	...	...	...	...	...	...	...	...	
Multan Canals Division	14.62	...	6.30	...	...	6.30	...	(b) 1.09	3.82	(d) 4.01	8.92	12.00	
Dera Ghazi Khan Division, Indus Canals.	4.65	...	18.72	...	...	18.72	...	(c) 1.10	...	(d) 1.52	2.62	20.75	
Muzaffargarh Canals Division.	0.05	0.21	0.78	...	...	0.99	0.10	0.09	0.64	(d) 0.02	0.85	0.19	
Lower Sutlej Inundation Canals Division.	...	...	0.77	...	...	0.77	...	0.12	0.36	...	0.48	0.29	
Western Jumna Canal, Karnal Division.	0.60	...	...	...	...	...	...	...	...	...	...	0.60	
Western Jumna Canal, Delhi Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Western Jumna Canal, Hissar Division.	...	...	3.00	...	...	3.00	...	...	...	...	...	3.00	
Sirhind Canal, Ferozepore Division.	...	...	0.44	...	...	0.44	...	...	...	...	...	0.44	
Sirhind Canal, Ludhiana Division.	...	...	4.82	...	...	4.82	...	...	(a) 4.00	(d) 0.14	4.14	0.68	
Sirhind Canal, Patiala Division	...	...	5.10	...	...	5.10	...	...	...	...	...	5.10	
Sirhind Canal, Bhatinda Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 2nd Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Total carried over ...	23.53	0.21	45.83	1.11	...	47.15	0.10	2.53	12.54	5.99	21.16	49.52	

STATEMENT No. I (b)—concluded.

PROGRESS STATEMENT OF NURSERIES IN THE CANALS DIVISION
FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3					4					5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
		<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Total brought forward	23·53	0·21	45·83	1·11	...	47·15	0·10	2·53	12·54	5·99	21·16	49·52	
Upper Chenab Canal, 3rd Division.	0·01	...	...	...	...	...	...	...	...	...	...	0·01	
Upper Chenab Canal, 4th Division.	...	...	0·10	...	...	0·10	...	...	...	...	...	0·10	
Upper Chenab Canal, 5th Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Khanki Division.	2·41	...	...	...	...	...	...	...	(a) 2·41	...	2·41	...	
Lower Chenab Canal, Lyallpur Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Lower Gugera Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Upper Gugera Division.	0·80	...	9·10	...	...	9·10	...	...	...	...	...	9·90	
Lower Chenab Canal, Jhang Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Burala Division.	3·00	...	...	...	...	...	...	...	...	...	...	3·00	
Upper Jhelum Canal, 1st Division.	...	...	0·23	...	...	0·23	...	...	...	...	...	0·23	
Upper Jhelum Canal, 2nd Division.	0·34	...	0·33	...	...	0·33	0·30	0·03	...	...	0·33	0·34	
Upper Jhelum Canal, 3rd Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Jhelum Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Jhelum Canal, 5th Division.	...	...	0·06	...	...	0·06	...	...	0·06	...	0·06	...	
Railway and Quarries Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division.	...	...	1·36	...	...	1·36	...	...	(d) 0·11	...	0·11	1·25	
Lower Jhelum Canal, 2nd Division.	1·70	...	...	...	...	...	...	...	(a) 1·00	...	1·00	0·70	
Lower Jhelum Canal, 3rd Division.	9·91	...	1·00	...	...	1·00	...	...	(a) 1·10	...	1·10	9·81	
Shahpur Inundation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Grand Total for 1908-09 to 1910-11.	41·70	0·21	58·01	1·11	...	59·33	0·40	2·56	17·22	5·99	26·17	74·86	
Total for 1905-06 to 1907-08.	35·78	...	...	...	...	80·50	...	...	...	...	74·58	41·70	

(a) To plantations.

(b) Partly due to heavy rains and partly to too late planting.

(c) 10 washed away by floods. 1·00 destroyed by sub-soil water.

(d) Transplanted to avenues.

STATEMENT No. I (c).

PROGRESS STATEMENT OF NURSERIES IN THE PROVINCIAL DIVISIONS
FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3					4					5	6
DIVISION.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
		<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Rawalpindi Division	3-00	...	1-44	...	...	1-44	...	0-25	...	(a) 0-53	0-78	3-66	
Simla Division	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division	2-00	...	0-60	...	...	0-60	...	...	(b) 0-37	...	0-37	2-23	
Lahore Division No. I.	5-98	11-42	2-59	...	...	14-01	...	...	(b) 1-81	...	1-81	18-18	
Jullundur Division	0-55	...	1-90	...	...	1-90	...	...	(b) 2-09	...	2-09	0-38	
Lyallpur Division...	1-14	...	0-84	...	...	0-84	...	...	...	(c) 0-45	0-45	7-53	
Shahpur Division	28-05	...	...	...	...	...	...	...	...	(d) 28-05	28-05	...	
Multan Division	0-02	...	...	...	...	...	...	...	...	...	...	0-02	
Ambala Division	1-66	...	0-82	...	(e) 0-84	1-66	...	0-03	(f) 1-06	(g) 0-27	1-36	1-96	
Delhi Division	1-90	...	0-27	...	...	0-27	...	...	...	...	...	2-17	
Lahore Division No. II.	0-78	...	0-11	...	...	0-11	...	...	0-05	...	0-05	0-84	
Total 1908-09 to 1910-11.	45-08	11-42	8-57	...	0-84	20-83	...	0-28	5-38	29-30	34-96	30-95	
Total for 1905-06 to 1907-08.	42-60	...	...	...	...	13-11	...	...	...	...	10-63	45-08	

(a) 0-15 acre transferred to avenues.
0-38 acre due to depredation by camels and cattle.

(b) To groves.

(c) 0-30 acre transferred to District Board, Sialkot.
0-15 acre to avenues.

(d) Transferred to District Board.

(e) Transferred from Ludhiana District.

(f) To Plantations.

(g) Transferred to avenues.

STATEMENT No. II (a).

PROGRESS STATEMENT OF PLANTATIONS IN THE DISTRICTS FOR THE
TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4						5						6	7
DISTRICT.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Succesfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other man- agement.	Other causes.	Total deductions.		
ARID DISTRICTS.																
Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Multan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dera Ghazi Khan ...	1,677'00	60'00	...	...	...	...	...	...	60'00	...	...	...	...	60'00	...	...
Mianwali ...	158'49	158'49	...	...	...	...	...	...	...	...	...	20'00	...	20'00	138'49	...
Montgomery ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang Municipality ...	38	1'22	...	...	...	...	...	...	...	...	...	...	...	...	1'22	...
Lyallpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hissar ...	139'66	83'23	...	...	...	...	...	...	...	...	...	...	...	...	83'23	...
Total Arid Districts ...	1,975'53	302'94	...	...	...	...	...	...	60'00	...	...	20'00	...	80'00	222'94	...
VERY DRY DISTRICTS.																
Ferozepore... ..	423'00	292'00	...	13'80	...	...	...	13'80	...	0'80	...	...	...	0'80	305'00	...
Rohtak ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore Municipality ...	1'03	...	...	1'03	...	...	...	1'03	...	...	...	...	...	...	1'03	...
Karnal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Very Dry Districts ...	424'03	292'00	...	14'83	...	...	...	14'83	...	0'80	...	...	...	0'80	306'03	...
DRY DISTRICTS.																
Jhelum ...	...	...	...	...	(b)	(c)	...	...	...	...	...	...	...	...	...	...
Gujranwala ...	46'00	46'00	...	...	3'50	6'25	...	9'75	...	...	...	...	...	...	55'75	...
Gurgaon ...	2,302'72	44'81	...	...	...	...	...	...	...	...	...	...	...	...	44'81	...
Amritsar ...	1'47	1'47	...	...	...	...	...	...	...	...	...	...	...	...	1'47	...
Amritsar Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delhi ...	68'21	18'11	...	12'30	...	...	...	12'30	1'00	...	...	...	...	1'00	29'41	...
Delhi Municipality ...	997'67	938'73	...	...	...	...	...	...	...	...	...	...	...	...	938'73	...
Jullundur ...	...	92'70	...	8'62	...	...	...	8'62	...	...	...	20'70	20'70	80'62	...	...
Ludhiana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Attock ...	...	5'50	...	...	...	...	...	...	...	...	...	...	...	...	5'50	...
Attock Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Dry Districts ...	3,416'07	1,147'32	...	20'92	3'50	6'25	...	30'67	1'00	...	...	...	20'70	21'70	1,156'29	...
FAIRLY MOIST OR FOREST DISTRICTS.																
Gujrat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gujrat Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gurdaspur ...	13'80	13'80	...	...	...	...	...	...	...	...	...	13'80	13'80	...	...	...
Ambala ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sialkot ...	...	5'00	...	4'00	(b)	4'96	...	8'96	...	1'16	...	(d)	3'00	4'16	9'80	...
Sialkot Municipality ...	...	2'00	...	...	...	...	...	...	2'00	...	...	...	...	2'00	...	...
Hoshiarpur...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simla ...	59'00	59'00	...	...	...	...	...	...	...	...	...	...	...	...	59'00	...
Kangra ...	57'78	57'78	...	...	...	...	...	...	...	...	...	...	...	...	57'78	...
Total Forest Districts ...	130'58	137'58	...	4'00	4'96	...	...	8'96	2'00	1'16	...	...	16'80	19'96	126'58	...
Total for 1908-09 to 1910-11.	5,946'21	(e) 1,879'84	...	39'75	8'46	6'25	...	54'46	63'00	1'96	...	20'00	37'50	122'46	1,811'84	...
Total for 1905-06 to 1907-08.	6,135'43	1,996'69	...	...	...	...	...	68'16	...	...	...	...	...	37'71	1,927'14	...

(a) Transferred to Muzaffargarh District.

(b) From nurseries.

(c) 6 acres transferred from Public Works Department, 25 acres from Lahore District Board.

(d) Sold.

(e) The Kangra Municipal Forests having been handed over to the Forest Department, 147'30 acres of plantations have been excluded from the opening balance of this statement.

STATEMENT No. II (b).

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4						5						6	7
DIVISION.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	Acre and decim- als.	
Upper Bari Doab Canal, 1st Division.	2,977-00	2,279-48	...	386-29	...	...	...	386-29	175-70	(a) 83-00	...	...	...	258-70	2,407-07	
Upper Bari Doab Canal, 2nd Division.	2,216-29	2,184-29	...	36-00	...	...	...	36-00	...	(b) 4-00	...	...	...	4-00	2,216-29	
Upper Bari Doab Canal, 3rd Division.	1,480-69	1,499-04	...	16-25	3-61	...	...	19-86	29-40	...	1-11	...	(c) 17-25	47-76	1,471-14	
Upper Sutlej Division, Inundation Canals.	256-12	233-16	...	105-70	...	...	...	105-70	0-01	(d) 7-69	...	...	(e) 2-70	10-40	328-46	
Central Workshop Division.	0-5	...	...	0-50	...	...	...	0-50	...	(m)	...	...	...	...	0-50	
Lower Bari Doab Canal, 1st Division.	20-10	...	...	15-20	...	...	...	15-20	...	(m) 13-24	...	...	...	13-24	1-96	
Lower Bari Doab Canal, 2nd Division.	31-40	...	...	31-40	...	...	...	31-40	...	(m) 16-62	...	...	...	18-62	12-78	
Lower Bari Doab Canal, 3rd Division.	...	...	...	47-39	...	...	...	47-39	...	(m) 31-29	...	...	...	31-29	16-16	
Sutlej Survey Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Multan Canals Division.	208-10	150-08	70-50	50-00	0-50	...	...	121-00	...	(f) ...	70-50	...	...	70-50	200-58	
D. G. Khan Division, Indus Canals.	8-12	8-12	...	1-81	0-85	...	...	2-66	...	5-71	...	...	...	5-71	5-07	
Muzaffargarh Canals Division.	16-36	16-36	2-13	2-54	0-06	...	...	4-78	0-09	0-48	...	...	...	0-57	26-52	
Lower Sutlej Division, Inundation Canals.	22-46	22-46	0-36	0-22	...	...	...	0-58	...	...	...	...	...	...	23-04	
Western Jumna Canal, Karnal Division.	1,137-33	873-01	...	...	...	...	...	...	...	...	...	(g) 13-40	...	13-40	859-61	
Western Jumna Canal, Delhi Division.	740-87	735-43	...	...	...	...	...	...	...	...	...	...	...	...	735-43	
Western Jumna Canal, Hissar Division.	892-97	682-42	91-25	27-38	...	13-40	...	132-03	...	(j) 17-38	...	...	(k) 20-00	37-38	777-07	
Sirhind Canal, Ferozepur Division.	3,255-68	2,362-06	...	...	...	...	...	...	...	...	...	...	(l) 17-00	17-00	2,345-86	
Sirhind Canal, Ludhiana Division.	3,931-74	3,212-51	...	111-73	4-00	...	...	115-73	...	(b) 19-00	...	...	...	10-00	3,318-24	
Sirhind Canal, Patiala Division.	3,925-85	2,698-46	...	81-45	...	...	...	81-45	...	(m) 20-18	...	...	...	20-18	2,759-73	
Sirhind Canal, Bhatinda Division.	2,087-00	1,269-02	...	36-60	...	...	...	36-60	...	(m) 3-00	...	...	(n) 11-20	14-20	1,291-42	
Upper Chenab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 2nd Division.	147-17	5-73	6-65	129-04	...	...	...	135-69	1-53	(m) 23-49	...	...	...	25-02	116-40	
Carried over	23,355-75	18,232-53	170-89	1,079-50	9-02	13-40	...	1,272-81	206-73	238-08	71-61	13-40	68-15	597-97	18,907-37	

STATEMENT No. II (b)—concluded.

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1908-09 TO 1910-11.

1 DIVISION.	2 Area taken up for plantation at the beginning of the triennial period.	3 Area successfully stocked at beginning of the period.	4 ADDITIONS DURING THE PERIOD.						5 DEDUCTIONS DURING THE PERIOD.						6 Area stocked at the end of the triennial period.	7 REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other Causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other Causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Brought forward.	23,355.75	18,232.53	170.89	1,079.50	9.02	13.40	...	1,272.81	206.73	238.08	71.61	13.40	68.15	597.97	18,907.37	
Upper Chenab Canal, 3rd Division.	214.83	8.50	32.84	172.20	...	...	...	205.04	...	(m) 63.53	...	...	...	63.53	150.01	
Upper Chenab Canal, 4th Division.	44.48	0.50	...	44.48	...	...	...	44.48	...	(b) 20.44	...	...	...	20.44	24.54	
Upper Chenab Canal, 5th Division.	18.18	9.60	...	4.60	...	...	...	4.60	...	3.66	...	...	(n) 4.26	7.92	6.28	
Lower Chenab Canal, Khanki Division.	1,625.20	1,211.34	...	135.72	2.41	...	...	138.13	...	...	...	...	(t) 27.60	27.60	1,321.87	
Lower Chenab Canal, Lyallpur Division.	953.44	953.44	...	64.12	...	...	...	64.12	...	(b) 44.40	...	...	(p) 14.14	58.54	959.02	
Lower Chenab Canal, Lower Gugera Division.	876.85	585.34	...	78.78	...	...	...	78.78	...	(o) 18.30	...	(q) 50.43	(p) 24.85	93.58	570.54	
Lower Chenab Canal, Upper Gugera Division.	1,009.85	885.29	...	15.00	...	...	...	15.00	...	...	...	...	(p) 3.46	3.46	896.83	
Lower Chenab Canal, Jhang Division.	675.65	636.65	...	5.05	...	...	...	5.05	...	(n) 5.05	...	...	(p) 36.04	41.09	600.61	
Lower Chenab Canal, Burala Division.	310.10	276.19	...	31.00	...	(s) 50.43	...	81.43	...	(e) 30.00	...	...	...	30.00	327.62	
Upper Jhelum Canal, 1st Division.	6.52	...	...	6.52	...	...	...	6.52	...	...	...	...	...	...	6.52	
Upper Jhelum Canal, 2nd Division.	44.83	...	...	44.65	...	...	...	44.65	...	23.86	...	...	...	23.86	20.79	
Upper Jhelum Canal, 3rd Division.	168.36	137.00	...	162.79	...	44.61	...	207.40	14.89	(o) 99.31	44.61	...	...	158.81	185.59	
Upper Jhelum Canal, IV Division.	188.30	25.70	17.00	186.74	...	...	...	203.74	...	89.71	...	...	(n) 2.50	92.21	137.23	
Upper Jhelum Canal, V Division.	1.00	...	...	1.00	...	...	...	1.00	...	...	...	...	...	...	1.00	
Railways and Quarries Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division.	515.15	255.80	...	126.00	...	...	...	126.00	...	(b) 75.75	...	...	...	75.75	306.05	
Lower Jhelum Canal, 2nd Division.	42.30	214.82	...	42.30	1.00	...	...	43.30	...	...	...	...	...	...	258.12	
Lower Jhelum Canal, 3rd Division.	1,018.60	821.66	...	40.00	1.10	...	...	41.10	...	...	...	...	...	...	862.76	
Shahpur Inundation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total 1908-09 to 1910-11.	31,069.41	24,254.36	220.73	2,240.45	13.53	108.44	...	2,583.15	221.62	712.09	116.22	63.83	181.00	1,294.76	25,542.75	
Total for 1905-06 to 1907-08.	30,524.29	22,517.59	...	...	...	...	...	5,532.71	...	...	...	...	...	3,795.94	24,254.36	

* Width of the effective plantation was wrongly taken more in the previous triennial report.

- (a) Due to cattle trespass.
 (b) Due to bad soil.
 (c) Cleared for mulberry plantation.
 (d) Due to excess of moisture.
 (e) Washed away by river.
 (f) 5.67 acres eroded by river.
 0.04 acre destroyed by sub-soil water.
 (g) Transferred to Hissar Division.
 (h) Transferred from Karnal Division.
 (i) 9.38 acres destroyed by white ants.
 8.00 acres by irregular supplies.

- (k) Sold.
 (l) Cleared and will be resown.
 (m) For want of water.
 (n) Abandoned.
 (o) Due to heavy rains.
 (p) Cut for making silting tanks.
 (q) Transferred to Burala Division.
 (r) Seed not germinated.
 (s) Transferred from Lower Gugera Division.
 (t) Cut for setting back of banks of main line.

STATEMENT No. II (c).

PROGRESS STATEMENT OF PLANTATIONS IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1 DIVISION.	2	3	4						5						6	7
	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
	Acres and decimals.	Acres and decimals.	Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	Acres and decimals.	
Rawalpindi Division ...	2'25	1'72	0'53	...	...	...	...	0'53	...	...	...	...	...	...	2'25	
Kangra Division ...	83'06	83'06	...	...	...	...	...	...	...	...	...	(a) 83'06	...	83'06	...	
Lahore Division No. I ...	...	1'36	...	...	...	...	(b) 13'84	13'84	...	...	...	...	...	...	15'20	
Jullundur Division ...	0'12	0'32	...	...	...	...	...	...	0'70	...	...	...	...	0'70	0'12	
Multan Division ...	...	...	...	...	...	...	(c) 7'27	7'27	...	...	...	...	...	...	7'27	
Ambala Division ...	...	1'12	...	...	1'06	...	...	1'06	...	...	(d) 0'73	...	...	0'73	1'45	
Total for 1908-09 to 1910-11.	85'43	88'08	0'53	...	1'06	...	21'11	22'70	0'70	...	0'73	83'06	...	84'49	25'29	
Total for 1905-06 to 1907-08.	87'84	85'99	...	...	...	...	...	2'11	...	...	...	...	...	0'02	88'08	

(a) Transferred to Kangra Committee.

(b) Natural plantation.

(c) Purchased from private persons.

(d) Transplanted to roadside avenues.

There are no plantations in the following Divisions :-

Lyallpur, Shahpur, Delhi and Lahore No. II.

STATEMENT No. III (a).

PROGRESS STATEMENT OF GROVES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD
1908-09 TO 1910-11.

1	2	3						4						5
DISTRICT.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.	
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.
ARID DISTRICTS.														
Muzaffargarh ...	245.42	2.00	9.51	...	(a) 36.77	(b) 8.45	56.73	...	...	...	...	(c) 9.51	9.51	292.64
Multan ...	0.50	...	...	...	...	...	...	...	...	...	...	...	...	0.50
Dera Ghazi Khan ...	10.00	...	...	...	...	...	...	...	10.00	...	...	...	10.00	...
Mianwali ...	44.44	...	12.20	...	...	...	12.20	...	...	...	(d) 10.00	...	10.00	46.64
Montgomery ...	746.00	...	...	...	...	...	...	...	...	...	...	...	...	746.00
Jhang ...	27.63	...	...	...	...	...	...	...	...	...	...	...	...	27.63
Jhang Municipality ...	10.98	...	...	...	...	...	...	...	...	...	...	...	...	10.98
Lyalpur ...	30.98	...	...	17.50	...	...	17.50	...	...	...	(e) 3.00	...	3.00	45.48
Shahpur ...	1,023.55	...	...	4.00	...	...	4.00	...	...	...	...	...	...	1,027.55
Hissar ...	314.87	...	1.25	...	(f) 5.62	...	6.87	...	...	...	...	...	...	321.74
Hissar Municipality ...	14.04	...	...	...	...	...	...	...	...	...	(g) 5.62	...	5.62	8.42
Total Arid Districts	2,468.41	2.00	22.96	21.50	42.39	8.45	97.30	...	10.00	...	18.62	9.51	38.13	2,527.58
VERY DRY DISTRICTS.														
Ferozepore ...	393.54	...	...	...	...	...	...	...	...	...	...	...	...	393.54
Rohatuk ...	543.94	...	...	(h) 0.14	...	...	0.14	...	...	...	...	...	...	544.08
Lahore ...	16.73	...	...	...	...	...	...	...	...	...	...	...	...	16.73
Lahore Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Karnal ...	363.31	...	...	...	...	...	...	...	...	...	...	...	...	363.31
Total Very Dry Districts	1,317.52	...	...	0.14	...	...	0.14	...	...	...	...	...	...	1,317.66
DRY DISTRICTS.														
Jhelum ...	5.62	...	13.64	...	...	...	13.64	...	...	...	...	(i) 3.50	3.50	15.76
Gujranwala ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gurgaon ...	282.86	...	...	...	...	...	...	...	...	...	...	...	...	282.86
Amritsar ...	48.98	...	0.35	...	...	...	0.35	...	0.14	...	...	...	0.14	49.19
Amritsar Municipality...	1.75	...	...	...	...	...	...	...	...	...	...	...	...	1.75
Delhi ...	19.44	...	5.32	...	(j) 4.20	...	9.52	...	...	0.07	(k) 5.69	...	5.76	23.20
Delhi Municipality ...	1.50	...	...	...	...	...	...	...	...	...	...	...	...	1.50
Jullundur ...	46.90	...	...	...	...	...	...	...	...	...	...	...	16.58	30.32
Ludhiana ...	167.40	...	...	...	...	...	...	...	...	(l) 2.10	...	...	2.10	165.30
Rawalpindi ...	162.26	...	...	...	...	...	...	...	...	...	...	(m) 0.14	0.14	162.12
Rawalpindi Municipality	15.21	...	...	0.50	...	...	0.50	...	...	...	...	(n) 1.00	1.00	14.71
Attock ...	31.65	...	...	...	...	...	...	...	...	...	...	...	...	31.65
Attock Municipality ...	3.05	...	1.18	...	...	...	1.18	...	...	...	...	...	...	4.23
Total Dry Districts	786.62	...	20.49	0.50	4.20	...	25.19	...	0.14	2.17	5.69	21.22	29.22	782.59
FAIRLY MOIST OR FOREST DISTRICTS.														
Gujrat ...	136.99	...	...	...	...	...	...	...	...	...	...	(o) 1.50	1.50	135.49
Gujrat Municipality ...	1.80	...	...	...	...	...	...	...	...	...	...	...	...	1.80
Gurdaspur ...	15.76	...	...	...	...	...	...	...	...	...	...	...	...	15.76
Ambala ...	32.48	...	...	0.01	...	...	0.01	...	...	...	...	(p) 0.01	0.01	32.48
Sialkot ...	(q) 25.89	...	...	...	...	...	...	...	...	...	...	...	...	25.89
Sialkot Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hoshiarpur ...	17.34	...	...	...	...	...	...	...	...	...	...	...	...	17.34
Simla ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kangra ...	20.50	...	...	...	...	...	...	...	...	...	...	...	...	20.50
Total Forest Districts	250.78	...	...	0.01	...	...	0.01	...	...	...	...	1.51	1.51	249.26
Total 1908-09 to 1910-11	4,823.31	2.00	43.45	22.15	46.59	8.45	122.64	...	10.14	2.17	24.31	32.24	68.86	4,877.09
Total 1905-06 to 1907-08	4,835.57	...	...	...	...	...	78.18	...	...	...	...	...	90.44	4,823.31

(a) From Mianwal District.

(b) Purchased from private individuals.

(c) Sold.

(d) Transferred to Muzaffargarh District.

(e) Auctioned and land made over to Forest Department.

(f) Transferred from Hansi Municipal Committee.

(g) Transferred to District Board.

(h) From Nurseries.

(i) Transferred from Police Department.

(j) Transferred to Police Department.

(k) Transferred with Buildings to Provincial Branch.

(l) Cut for ornamental gardens.

(m) Trees cut and removed.

(n) Made over to zamindars.

(o) Includes 232 acres transferred from Lyallpur Provincial Division.

STATEMENT No. III (c).

PROGRESS STATEMENT OF GROVES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1 DIVISION.	2 Area of groves at the beginning of the triennial period.	3 ADDITIONS DURING THE PERIOD.						4 DEDUCTIONS DURING THE PERIOD.						5 Area stocked with trees or plants alive at the end of the triennial period.	6 REMARKS.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
		<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Rawalpindi Division ...	217.24	140.02	...	...	...	...	140.02	25.05	5.86	(a) 2.50	...	...	33.41	323.85	
Simla Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division ...	0.48	...	...	(b) 0.37	...	...	0.37	...	...	...	...	...	...	0.85	
Lahore Division No. I...	9.12	...	...	(b) 1.81	...	...	1.81	9.12	...	...	...	...	9.12	1.81	
Jullundur Division ...	2.87	...	...	(b) 2.09	...	...	2.09	0.04	...	...	...	(c) 0.87	0.91	4.05	
Lyalpur Division ...	270.13	...	...	...	...	...	...	...	...	...	(d) 2.32	...	2.32	267.81	
Shahpur Division *	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Multan Division ...	3.06	...	...	...	...	...	...	...	...	...	...	...	...	3.06	
Ambala Division ...	0.08	...	...	...	(e) 20.52	...	20.52	...	...	...	...	...	...	20.60	
Delhi Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lahore Division No. II	20.52	...	...	...	...	...	...	...	...	...	...	...	...	20.52	
Total 1908-09 to 1910-11	523.50	140.02	...	4.27	20.52	...	164.81	34.21	5.86	2.50	2.32	0.87	45.76	642.55	
Total 1905-06 to 1907-08	502.22	...	...	...	...	...	22.46	...	...	...	...	...	1.18	523.50	

(a) Transferred to roadside Avenues.

(b) From Nurseries.

(c) Felled and cleared.

(d) Transferred to District Board, Sialkot.

(e) Transferred from Ludhiana District.

STATEMENT No. IV (a).

PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4					5					6		
DISTRICT.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.		
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.		Total deductions.	
															Miles and decimals.
ARID DISTRICTS.															
Muzaffargarh ...	358.84	161.76	...	23.70	(a) 15.00	...	38.70	1.00	4.30	4.15	...	(b) 0.61	10.00	190.40	
Multan ...	1,062.68	256.64	...	79.54	...	(c) 1.44	80.98	6.49	13.87	18.97	...	...	39.33	298.20	
Dera Ghazi Khan ...	133.00	107.64	...	15.35	...	...	15.35	...	10.35	...	...	(d) 2.00	12.35	110.64	
Mianwali ...	64.00	61.55	...	...	...	...	...	...	...	...	...	(e) 15.00	15.00	46.55	
Montgomery ...	182.50	110.50	...	17.50	...	...	17.50	...	...	...	...	...	...	128.00	
Jhang ...	700.00	124.50	14.00	38.00	...	...	52.00	...	15.00	...	...	...	15.00	161.50	
Jhang Municipality ...	17.49	16.49	...	...	...	...	...	...	...	...	...	...	...	16.49	
Lyallpur ...	1,101.50	587.50	...	118.50	...	...	118.50	...	42.50	...	...	...	42.50	663.50	
Shahpur ...	542.62	477.36	...	68.75	(f) 0.54	...	69.29	...	5.75	2.50	...	(g) 5.00	13.25	533.40	
Shahpur Municipality ...	16.88	16.88	...	...	...	...	...	...	...	...	...	...	...	16.88	
Hissar ...	393.81	125.05	...	13.00	(h) 2.04	...	15.04	...	...	...	...	...	...	140.09	
Hissar Municipality ...	5.59	5.21	...	0.15	...	...	0.15	...	...	...	(i) 2.04	...	2.04	3.32	
Total Arid Districts ...	4,578.91	2,051.08	14.00	374.49	17.58	1.44	407.51	7.49	91.77	25.62	2.04	22.61	149.53	2,309.06	
VERY DRY DISTRICTS.															
Ferozepore ...	733.84	568.75	...	25.50	...	...	25.50	...	16.20	...	...	...	16.20	578.05	
Rohtak ...	473.08	207.45	...	13.50	...	...	13.50	...	...	...	...	...	...	220.95	
Lahore ...	413.41	287.44	...	19.25	(j) 49.50	...	68.75	...	...	...	...	...	...	356.19	
Lahore Municipality ...	75.74	59.18	...	12.55	...	...	12.55	...	0.30	...	...	...	0.30	71.43	
Karnal ...	677.89	156.09	...	4.00	...	...	4.00	...	...	...	...	...	...	160.09	
Karnal Municipality ...	8.45	7.95	...	...	...	...	...	...	...	...	...	...	...	7.95	
Total Very Dry Districts ...	2,382.41	1,286.86	...	74.80	49.50	...	124.30	...	16.50	...	...	...	16.50	1,394.66	

(a) Transferred from Mianwali District.

(b) Trees died.

(c) Spontaneous growth.

(d) Sold.

(e) Transferred to Muzaffargarh District.

(f) Transferred from Jhelum District.

(g) Washed away by river action.

(h) Transferred from Sirsa Municipality.

(i) Transferred to District Board.

(j) Transferred from Public Works Department.

STATEMENT No. IV (a)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11—concluded.

1	2	3	4					5						6	7	
DISTRICT.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.	
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.			
																Miles and decimals.
DRY DISTRICTS																
Thelum ...	358.89	313.37	...	9.21	...	...	9.21	...	5.93	7.75	(k) 0.54	...	14.22	308.36		
Thelum Municipality	16.51	22.89	...	10.00	...	...	10.00	...	4.00	...	...	...	4.00	28.89		
Fujranwala	643.38	251.01	...	32.75	(l) 53.00	...	85.75	...	11.10	...	...	...	11.10	325.66		
Gurgaon	396.15	230.13	...	...	...	...	...	...	...	...	...	...	...	230.13		
Amritsar	288.45	210.00	...	90.34	...	...	90.34	...	(m) 61.14	15.63	...	...	76.77	223.57		
Amritsar Municipality	66.00	58.09	...	...	...	...	...	...	...	...	...	...	...	58.09		
Delhi	400.68	156.99	0.75	10.34	(n) 8.00	...	19.09	10.00	2.75	...	16.75	...	29.50	146.58		
Delhi Municipality	38.00	27.00	...	...	...	...	...	...	0.72	...	...	...	0.72	26.28		
Jullundur	283.35	234.93	...	7.50	...	...	7.50	...	...	...	...	...	...	242.43		
Ludhiana	291.81	231.56	...	5.00	...	...	5.00	...	2.00	...	...	...	2.00	234.56		
Rawalpindi	800.47	304.00	...	60.00	...	...	60.00	...	...	...	...	(d) 12.00	12.00	352.00		
Rawalpindi Municipality	18.00	10.75	...	...	...	...	...	...	...	...	...	(d) 0.75	0.75	10.00		
Attock	877.58	121.25	...	4.60	(n) 5.50	...	10.10	...	...	4.25	...	...	4.25	127.10		
Attock Municipality	...	4.25	...	0.28	...	...	0.28	...	...	...	...	...	...	4.53		
Total Dry Districts	4,479.27	2,176.22	0.75	230.02	66.50	...	297.27	10.00	87.64	27.63	17.29	12.75	155.31	2,318.18		
FAIRLY MOIST OR FOREST DISTRICTS.																
Gujrat	612.09	520.62	...	80.16	...	...	80.16	...	8.90	4.05	...	(p) 3.83	16.78	584.00		
Gujrat Municipality	12.33	11.61	...	1.02	...	...	1.02	...	4.1	1.36	...	...	1.81	10.82		
Gurdaspur	610.00	501.61	...	...	...	...	...	...	...	...	...	...	...	501.61		
Ambala	332.46	142.25	4.60	46.47	...	...	51.07	...	6.00	...	...	...	6.00	187.32		
Sialkot	841.51	577.38	...	100.25	(q) 17.17	...	117.42	...	31.63	20.00	...	...	51.63	643.17		
Sialkot Municipality	7.49	6.24	...	0.50	...	...	0.50	...	0.40	0.59	...	...	0.99	5.75		
Hoshiarpur	567.16	506.75	...	12.25	...	...	12.25	...	8.00	...	...	...	3.00	516.00		
Simla	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Kangra	521.67	521.67	...	39.02	...	...	39.02	...	...	8.63	...	(d) 8.63	17.26	543.46		
Total Forest Districts	3,504.71	2,788.13	4.60	279.67	17.17	...	301.44	...	50.38	34.63	...	12.46	97.47	2,992.10		
(s)																
Total for 1908-09 to 1910-11	14,945.30	8,302.29	19.35	958.98	150.75	1.44	1,130.52	17.49	246.29	87.88	19.33	48.02	418.81	9,014.00		
Total for 1905-06 to 1907-08	14,537.14	7,516.24	...	...	...	...	1,295.19	...	...	...	...	...	502.79	8,308.64		

(k) Transferred to Shahpur District.

(l) Transferred from Lahore District Board.

(m) Due to excessive rains.

(n) Transferred from Public Works Department.

(o) Transferred to zamindars.

(p) Blown down by wind storms.

(q) Transferred from Lyallpur Provincial Division.

(r) Includes 19.75 miles transferred from Lyallpur Provincial Division.

(s) 6.35 miles on account of the Dharmasala Municipality have been excluded from these figures in consequence of the transfer of the forests to the Forest Department.

STATEMENT No. IV (b).

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4					5						6	7
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
Upper Bari Doab Canal, 1st Division.	178.70	177.26	...	5.64	...	...	5.64	...	...	...	...	...	...	182.90	
Upper Bari Doab Canal, 2nd Division.	100.80	100.80	...	...	...	...	...	...	...	...	...	...	...	100.80	
Upper Bari Doab Canal, 3rd Division.	139.00	86.20	30.00	...	...	...	30.00	...	...	...	...	...	...	116.20	
Upper Sutlej Division Inundation Canal.	512.27	380.38	...	0.58	...	...	0.58	...	...	...	...	(a) 1.60	1.60	379.36	
Central Workshop Division.	0.14	...	...	0.14	...	...	0.14	...	...	...	...	...	...	0.14	
Lower Bari Doab Canal, 1st Division.	2.00	...	...	0.10	(b) 1.50	...	1.60	...	0.30	...	...	...	0.30	1.30	
Lower Bari Doab Canal, 2nd Division.	23.34	...	...	2.70	...	...	2.70	...	...	...	...	...	...	2.70	
Lower Bari Doab Canal, 3rd Division.	...	...	...	0.58	...	...	0.58	...	...	...	...	...	...	0.58	
Sutlej Survey Division ...	...	...	...	...	...	(c) ...	...	...	...	...	...	...	...	...	
Multan Canals Division ...	443.75	233.11	3.80	131.30	...	10.40	145.50	...	30.10	...	...	...	30.10	348.51	
Dera Ghazi Khan Division, Indus Canal.	602.39	190.56	15.30	110.71	(d) 5.00	...	131.01	1.40	12.10	7.45	...	(e) 8.48	29.43	292.14	
Muzaffargarh Canals Division.	220.70	158.50	5.75	106.25	...	...	112.00	...	5.60	7.00	...	18.09	30.69	239.81	
Lower Sutlej Inundation Canals Division.	560.46	251.70	...	11.30	0.50	...	11.80	0.50	...	...	...	(e) 13.60	14.10	249.40	
Western Jumna Canal, Karnal Division.	252.00	135.45	...	...	...	...	...	...	...	...	(f) 2.60	...	2.60	132.85	
Western Jumna Canal, Delhi Division.	277.23	277.23	...	7.40	...	...	7.40	...	...	...	...	...	...	284.63	
Western Jumna Canal, Hissar Division.	184.70	150.05	...	13.80	(g) 2.60	...	16.40	7.80	17.75	...	...	...	25.55	140.90	
Sirhind Canal, Ferozepore Division.	361.20	115.22	...	...	...	...	...	...	...	...	...	...	...	115.22	
Sirhind Canal, Ludhiana Division.	247.72	184.14	...	13.65	...	...	13.65	...	...	...	...	...	...	197.79	
Sirhind Canal, Patiala Division.	221.74	170.64	...	2.00	...	...	2.00	...	0.40	...	...	...	0.40	172.24	
Sirhind Canal, Bhatinda Division.	126.80	57.89	...	...	...	...	...	...	...	...	...	...	...	57.89	
Upper Chenab Canal, 1st Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 2nd Division.	40.00	...	1.03	28.16	...	...	29.19	...	15.56	...	...	...	15.56	13.63	
Upper Chenab Canal, 3rd Division.	44.46	1.00	...	0.26	...	...	0.26	...	...	...	...	...	...	1.23	
Upper Chenab Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Chenab Canal, 5th Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Carried over	4,539.40	2,670.13	55.88	434.57	9.60	10.40	510.45	9.70	81.81	14.45	2.60	41.77	150.33	3,030.25	

(a) Due to destruction by wire.

(b) From nurseries.

(c) Transferred within division.

(d) Transferred with land required for Kotla embankment.

(e) Sold.

(f) Transferred to Hissar division.

(g) Transferred from Karnal Division.

STATEMENT No. IV (b)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1908-09 to 1910-11—concluded.

1	2	3	4					5					6	7	
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.	
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.			Total deductions.
Brought forward ...	4,539.40	2,670.13	55.88	434.57	9.60	10.40	510.45	9.70	81.81	14.45	2.60	41.77	150.33	3,030.25	
Lower Chenab Canal, Khanki Division.	220.09	141.46	...	11.74	...	...	11.74	4.00	...	...	...	(h) 9.10	13.10	140.10	
Lower Chenab Canal, Lyallpur Division.	484.42	263.10	...	26.50	...	...	26.50	...	...	...	...	(i) 3.80	3.80	285.80	
Lower Chenab Canal, Lower Gugera Division.	706.02	233.48	11.30	62.33	...	...	73.63	...	5.10	...	(j) 23.60	0.10	28.80	278.31	
Lower Chenab Canal, Upper Gugera Division.	587.49	387.33	...	2.60	...	...	2.60	0.11	...	...	...	(i) 3.60	3.71	386.22	
Lower Chenab Canal, Jhang Division.	469.61	235.30	...	13.80	...	...	13.80	0.71	11.10	...	...	...	11.81	237.29	
Lower Chenab Canal, Burala Division.	303.62	234.34	46.50	58.90	(k) 23.60	...	129.00	(l) 4.40	(m) 61.40	...	...	...	65.80	297.54	
Upper Jhelum Canal, 1st Division.	3.60	...	...	1.00	...	...	1.00	...	0.25	...	...	...	0.25	0.75	
Upper Jhelum Canal, 2nd Division.	7.60	0.50	...	...	...	...	...	...	...	...	...	...	...	0.50	
Upper Jhelum Canal, 3rd Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Upper Jhelum Canal, 4th Division.	22.90	...	...	17.12	...	...	17.12	...	16.12	...	...	...	16.12	1.00	
Upper Jhelum Canal, 5th Division.	10.20	...	...	5.90	...	...	5.90	...	4.60	...	...	...	4.60	1.30	
Railways and Quarries Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division.	262.24	81.34	1.00	51.80	...	...	52.80	...	...	21.04	...	...	21.04	113.16	
Lower Jhelum Canal, 2nd Division.	708.20	507.50	119.50	56.14	...	...	175.64	(n) 402.80	36.24	...	...	...	439.04	244.10	
Lower Jhelum Canal, 3rd Division.	539.00	220.80	...	47.40	...	...	47.40	...	3.20	...	...	...	3.20	265.00	
Shahpur Inundation Canals Division.	237.49	31.96	...	...	...	...	...	...	...	...	...	...	...	31.96	
Total for 1908-09 to 1910-11.	9,101.88	5,007.24	234.18	789.80	33.20	10.40	1,067.58	421.72	219.82	35.49	26.20	58.37	761.60	5,313.22	
Total for 1905-06 to 1907-08.	8,773.14	4,274.86	...	...	...	...	2,071.13	...	...	...	...	...	1,338.75	5,007.24	

(h) Due to setting back banks of main line.

(i) Cut down for silting tanks.

(j) Transferred to Burala division.

(k) Transferred from Lower Gugera Division.

(l) Erroneously shown in last return.

(m) Due to bad soil and intense heat.

(n) Written off to make the record clear and true.

STATEMENT No. IV (c).

PROGRESS STATEMENT OF AVENUES IN THE PROVINCIAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4					5						6	7
DIVISION.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
Rawalpindi Division	76'22	87'41	...	11'00	...	...	11'00	24'89	1'97	0'45	...	(a) 1'10	28'41	70'00	
Simla Division	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division	76'74	133'75	...	22'34	...	...	22'34	...	1'00	...	...	...	1'00	155'09	
Lahore Division No. I	116'37	116'37	...	7'98	...	...	7'98	88'41	...	...	...	...	88'41	35'94	
Jullundur Division	126'99	105'01	5'53	8'78	...	...	14'31	15'96	0'75	1'05	...	...	17'76	101'56	
Lyallpur Division	99'53	106'92	0'39	3'00	...	...	3'39	0'58	2'00	3'00	(b) 36'92	...	42'50	67'81	
Shahpur Division	10'44	5'68	...	5'96	...	...	5'96	...	1'35	...	(c) 10'29	...	11'64	...	
Multan Division	50'67	47'59	...	...	...	(d) 3'04	3'04	...	...	...	...	(e) 1'23	1'23	49'40	
Ambala Division	220'59	306'05	...	15'48	(f) 41'34	...	57'32	(g) 229'27	3'45	1'49	...	...	234'21	129'16	
Delhi Division	89'40	69'27	...	3'00	...	...	3'00	...	...	...	...	...	...	72'27	
Lahore Division No. II	53'37	68'59	...	3'26	...	...	3'26	...	...	0'42	...	...	0'42	71'43	
Total for 1908-09 to 1910-1911.	920'32	1,046'64	5'92	80'80	41'34	3'04	131'60	359'11	10'52	6'41	47'21	2'33	425'58	752'66	
Total for 1905-06 to 1907-1908.	1,356'29	904'23	...	...	...	...	465'62	...	...	...	...	...	323'21	1,346'64	

(a) Due to depredation by camels and cattle.

(b) Transferred to District Board, Sialkot.

(c) Transferred to District Board.

(d) Purchased from private persons.

(e) Portion flooded by river action.

(f) Transferred from Ludhiana District.

(g) Written off to make the record clear and true.

STATEMENT No. V (a).

INCOME FROM ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4	5	6	7	8
DISTRICT.	Ornamental gar- dens.	Nurseries.	Plantations.	Groves and ave- nues.	Miscellaneous.	Total.	REMARKS.
Muzaffargarh...	Rs. 5,395	Rs. ...	Rs. ...	Rs. 16,299	Rs. 1,115	Rs. 22,809	
Multan ...	3,915	...	...	...	4,368	8,283	
Dera Ghazi Khan ...	2,089	...	...	1,141	...	3,180	
Mianwali ...	2,372	...	5,781	674	...	8,827	
Montgomery ...	1,909	...	...	2,803	...	4,712	
Jhang ...	2,627	16	...	1,339	222	4,704	
Do. Municipality ...	244	...	...	3,276	668	4,188	
Lyalpur ...	...	...	...	5,680	...	5,680	
Shahpur ...	10,351	...	...	28,664	15,211	54,226	
Do. Municipality ...	...	...	...	943	...	943	
Hissar ...	4,090	...	...	1,177	...	5,267	
Do. Municipality ...	728	...	...	...	...	728	
Ferozepore ...	2,218	...	5,363	22,171	...	29,752	
Rohtak ...	2,901	25	...	5,452	...	8,378	
Lahore ...	130	...	...	10,718	...	10,848	
Do. Municipality ...	23,656	...	...	3,346	622	27,624	
Karnal ...	2,446	11	...	5,804	154	8,415	
Jhelum ...	7,591	...	...	16,363	...	23,954	
Gujranwala ...	5,978	...	...	8,600	...	14,578	
Do. Municipality ...	948	...	...	1,549	...	2,497	
Gurgaon ...	208	151	849	9,339	...	11,047	
Amritsar ...	1,116	...	...	20,047	...	21,163	
Do. Municipality ...	9,966	...	...	7,056	18,833	35,855	
Delhi ...	...	...	...	5,255	9,000	14,255	
Do. Municipality ...	16,000	4,760	5,595	1,072	...	27,427	
Jullundur ...	1,800	1,305	4,538	28,129	1,274	37,046	
Ludhiana ...	4,650	...	...	20,475	270	25,395	
Rawalpindi ...	2,627	427	...	9,681	...	12,735	
Do. Municipality ...	1,401	...	...	1,416	55,753	58,570	
Attock ...	...	425	...	2,305	...	2,730	
Do. Municipality ...	337	...	...	59	...	396	
Gujrat ...	673	...	...	43,231	...	43,904	
Do. Municipality ...	490	...	...	1,134	...	1,624	
Gurdaspur ...	8,880	140	4,000	19,252	6,600	38,872	
Ambala ...	900	...	...	11,106	...	12,006	
Sialkot ...	9,370	1,295	...	97,643	1,050	1,09,358	
Do. Municipality ...	...	...	...	1,569	...	1,569	
Hoshiarpur ...	3,833	...	...	42,114	...	45,947	
Simla ...	...	666	7,287	...	954	8,907	
Kangra ...	1,071	...	...	9,818	...	10,889	
Total for 1908-09 to 1910-11 ...	1,42,860	9,221	33,413	4,67,700	1,16,094	7,69,288	
Total for 1905-06 to 1907-08 ...	1,55,939	3,414	19,976	3,80,273	79,936	6,39,538	

STATEMENT No. V (b).

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, 1st Division...	1,803	...	25,737	...	3,317	30,857	
Upper Bari Doab Canal, 2nd Division ..	...	...	14,536	...	2,141	16,677	
Upper Bari Doab Canal, 3rd Division...	135	...	15,087	...	2,597	17,849	
Upper Sutlej Division, Inundation Canals,	4	...	10,806	21	3,725	14,556	
Lower Bari Doab Canal, 1st Division	...	...	...	...	...	...	
Lower Bari Doab Canal, 2nd Division.	...	...	...	...	...	...	
Lower Bari Doab Canal, 3rd Division.	...	...	...	...	...	...	
Multan Canals Division ...	16	...	11,272	98	896	12,282	
Dera Ghazi Khan Division, Indus Canals.	176	...	6,757	7,766	385	15,084	
Muzaffargarh Canals Division ...	1,125	...	11,706	5,957	1,803	20,591	
Lower Sutlej Inundation Canals Division.	72	...	2,336	1,191	3,174	6,773	
Western Jumna Canal, Karnal Division.	583	...	7,141	...	1,016	8,740	
Western Jumna Canal, Delhi Division	5,854	...	11,670	...	...	17,524	
Western Jumna Canal, Hissar Division	383	70	16,949	...	3,465	20,867	
Sirhind Canal, Ferozepore Division ...	...	...	50,116	...	...	50,116	
Sirhind Canal, Ludhiana Division ...	55	...	45,454	...	19,378	64,887	
Sirhind Canal, Patiala Division ...	606	...	3,462	264	23,783	28,115	
Sirhind Canal, Bhatinda Division ...	14	...	5,989	...	9,175	15,178	
Upper Chenab Canal, 1st Division ...	...	...	...	...	...	...	
Upper Chenab Canal, 2nd Division ...	...	...	...	...	...	...	
Upper Chenab Canal, 3rd Division ...	...	...	...	...	...	...	
Upper Chenab Canal, 4th Division ...	...	...	...	...	...	...	
Upper Chenab Canal, 5th Division ...	...	...	...	...	...	...	
Lower Chenab Canal, Khanki Division	56	...	4,394	...	1,836	6,286	
Lower Chenab Canal, Lyallpur Division.	...	...	4,039	1,162	6,606	11,807	
Lower Chenab Canal, Lower Gugera Division.	...	...	4,580	...	5,529	10,109	
Lower Chenab Canal, Upper Gugera Division.	840	...	801	988	2,029	4,658	
Lower Chenab Canal, Jhang Division	...	...	1,521	...	320	1,841	
Lower Chenab Canal, Burala Division	...	...	235	9	...	244	
Carried over ...	11,752	70	2,54,588	17,456	91,175	3,75,041	

STATEMENT No. V (b)—concluded.

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD 1908-09 to 1910-11—concluded.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Brought forward ...	11,752	70	2,54,588	17,456	91,175	3,75,041	
Upper Jhelum Canal, 1st Division ...	...	...	...	...	...	...	
Upper Jhelum Canal, 2nd Division ...	...	...	...	...	...	...	
Upper Jhelum Canal, 3rd Division ...	...	...	76	...	...	76	
Upper Jhelum Canal, 4th Division ...	...	...	...	...	...	...	
Upper Jhelum Canal, 5th Division ...	...	...	...	...	...	...	
Railways and Quarries Division ...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division ...	151	...	...	...	946	1,097	
Lower Jhelum Canal, 2nd Division ...	360	...	2,014	31	331	2,736	
Lower Jhelum Canal, 3rd Division ...	14	...	1,474	...	...	1,488	
Shahpur Inundation Canals ...	...	...	36	1,273	...	1,309	
Total for 1908-09 to 1910-11 ...	12,277	70	2,58,188	18,760	92,452	3,81,747	
Total for 1905-06 to 1907-08 ...	4,455	...	2,77,838	26,343	82,553	3,91,189	

STATEMENT No. V (c).

INCOME FROM ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rawalpindi Division ...	183	...	646	679	4,124	5,632	
Simla Division ...	...	...	...	...	...	...	
Kangra Division ...	...	...	...	259	948	1,207	
Lahore Division No. I ...	...	...	...	6,740	...	6,740	
Jullundur Division ...	...	...	...	17,003	6,000	23,003	
Lyallpur Division ...	325	...	...	21,239	856	22,470	
Shahpur Division ...	...	...	...	...	...	...	
Multan Division ...	...	...	...	1,248	...	1,248	
Ambala Division ...	30	...	15	13,111	12,465	25,621	
Delhi Division ...	...	...	...	4,058	1,605	5,663	
Lahore Division No. II ...	...	...	...	574	...	574	
Total for 1908-09 to 1910-11 ...	538	...	661	64,961	25,998	92,158	
Total for 1905-06 to 1907-08 ...	741	224	7,189	64,004	23,646	95,804	

STATEMENT No. VI (a).

EXPENDITURE ON ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4	5	6	7	8	9	10	11	12
DISTRICT.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General Supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Fuzaffargarh ...	9,373	2,688	...	...	...	...	13,789	263	7,356	33,469	
Fultan ...	3,633	...	...	...	...	...	3,285	...	13,956	20,874	
Ira Ghazi Khan ...	...	2,031	...	...	...	...	...	...	4,621	6,652	
Mianwali ...	14,344	545	...	...	2,244	...	12,256	...	1,958	31,347	
Montgomery ...	10,538	...	...	...	...	...	5,407	2,500	3,920	22,365	
Muzang ...	13,681	...	6	...	...	...	3,930	2,838	13,043	33,503	
Do. Municipality ...	2,105	...	...	...	...	...	3,674	...	...	5,779	
Lyallpur ...	...	...	...	...	...	...	...	26,800	67,888	94,688	
Shahpur ...	6,465	...	...	...	...	...	38,878	23,326	6,600	75,269	
Do. Municipality ...	...	...	...	...	...	...	404	...	...	404	
Hissar ...	10,766	371	1,653	...	...	...	32,648	...	...	45,438	
Do. Municipality ...	5,155	...	...	...	28	389	...	230	...	5,802	
Ferozepore ...	17,093	...	30	...	4,795	537	16,756	5,231	2,001	46,443	
Rohtak ...	10,696	...	990	...	...	...	19,330	...	2,858	33,874	
Lahore ...	658	...	...	...	...	...	14,076	4,027	1,388	20,149	
Do. Municipality ...	{ 53,574 5,089 }	...	...	...	...	...	{ 28,361 127 }	...	6,376	{ 81,935 11,592 }	
Karnal ...	3,332	...	760	...	...	...	6,327	703	3,273	14,400	
Jhelum ...	14,246	...	...	...	...	...	9,159	...	3,324	26,729	
Gujranwala ...	17,330	...	1,216	...	...	...	19,071	...	7,728	45,345	
Do. Municipality ...	9,440	...	...	...	...	...	1,700	...	...	11,140	
Gurgaon ...	4,574	...	1,273	68	489	...	18,083	...	3,201	27,688	
Amritsar ...	3,337	...	...	...	...	...	19,286	...	...	22,623	
Do. Municipality ...	17,144	580	...	...	...	...	3,855	...	28,506	50,085	
Delhi ...	...	...	737	...	1,033	2,030	18,806	2,967	1,251	26,824	
Do. Municipality ...	30,604	1,473	...	...	1,067	...	3,125	...	7,340	43,609	
Jalandhar ...	8,440	...	2,818	...	...	...	13,132	...	6,402	30,792	
Ludhiana ...	11,014	2,000	2,276	...	...	...	18,709	...	150	*34,149	
Rawalpindi ...	1,548	...	...	...	...	...	10,850	...	...	12,398	
Do. Municipality ...	7,768	...	...	...	...	...	504	...	3,232	11,504	
Attock ...	...	...	5,657	...	2,593	...	6,895	...	251	15,396	
Do. Municipality ...	1,755	...	...	...	...	...	499	...	...	2,254	
Gujrat ...	6,034	...	1,404	...	...	...	30,011	...	4,132	41,581	
Do. Municipality ...	1,163	...	...	...	14	...	618	9	...	1,804	
Gurdaspur ...	9,121	...	1,583	245	...	...	16,707	...	320	27,976	
Ambala ...	3,785	500	180	1,080	...	...	8,056	6,000	2,100	19,701	
Sialkot ...	18,488	...	2,620	...	...	...	25,600	13,970	13,882	74,560	
Do. Municipality ...	...	...	...	...	...	...	...	...	1,277	1,277	
Hoshiarpur ...	5,837	...	...	...	...	...	25,318	...	...	31,155	
Simla ...	...	...	578	...	3,689	...	...	...	2,461	6,728	
Kangra ...	3,269	...	...	...	...	...	9,857	...	...	13,126	
Total for 1908-09 to 1910-11	3,41,399	10,188	23,781	1,393	15,952	2,956	4,57,089	88,864	2,20,805	11,62,427	
Total for 1905-06 to 1907-08	3,51,576	4,813	21,274	4,384	7,859	521	3,00,092	97,126	1,68,701	9,56,346	

*Rupees 414 paid for maintenance of clock tower, &c., garden to the municipal committee, Ludhiana, not included.

STATEMENT No. VI (b).

EXPENDITURE ON ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	WORKS.								ESTAB- LISH- MENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising estab- lish- ment, including office estab- lishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
Upper Bari Doab Canal, 1st Division ...	Rs. 7,072	Rs. ...	Rs. ...	Rs. 490	Rs. 31,740	Rs. 9,651	Rs. 1,422	Rs. 2,942	Rs. 7,417	Rs. 60,734	
Ditto, 2nd Division ...	7,552	...	...	...	14,775	9,408	...	...	...	31,735	
Ditto, 3rd Division ...	5,585	...	...	...	10,805	...	182	...	...	16,572	
Upper Sutlej Division, Inundation Canals	21,704	...	...	...	2,285	...	6,733	...	...	30,722	
Central Workshop Division ...	...	...	...	...	963	...	...	...	...	963	
Lower Bari Doab Canal, 1st Division ...	...	...	...	577	...	225	...	227	...	1,029	
Ditto, 2nd Division ...	1,866	337	...	20	...	589	...	...	...	2,812	
Ditto, 3rd Division ...	...	1,052	...	...	...	507	...	...	456	2,015	
Sutlej Survey Division ...	...	...	...	...	...	...	...	...	...	...	
Multan Canals Division ...	4,907	118	793	311	2,674	4,242	14,496	6,353	13,877	47,711	
Dera Ghazi Khan Division, Indus Canal ...	4,820	650	3,749	1,233	4,243	11,857	16,770	4,734	100	48,156	
Muzaffargarh Canals Division ...	1,459	197	...	10	3,993	102	8,654	3,170	...	17,585	
Lower Sutlej Inundation Canals Division...	1,818	...	485	12	7,050	84	2,565	586	...	12,600	
Western Jumna Canal, Karnal Division ...	11,923	568	1,880	...	909	25	634	...	...	15,939	
Ditto, Delhi Division ...	12,848	463	...	...	607	...	541	...	...	14,459	
Ditto, Hissar Division ...	7,304	277	90	...	1,597	524	1,496	502	1,852	13,642	
Sirhind Canal, Ferozepore Division ...	3,367	...	912	...	11,733	...	...	...	...	16,012	
Ditto, Ludhiana Division ...	8,965	180	...	609	3,493	2,355	2,519	1,302	...	19,423	
Ditto, Patiala Division ...	8,632	...	914	880	582	1,214	...	...	...	12,222	
Ditto, Bhatinda Division ...	8,556	...	...	...	1,315	2,517	825	...	...	13,213	
Upper Chenab Canal, 1st Division ...	...	...	...	...	...	...	...	...	...	...	
Ditto, 2nd Division ...	1,468	...	...	...	...	5,241	...	100	364	7,173	
Ditto, 3rd Division ...	2,480	...	...	...	482	1,725	...	...	1,438	6,125	
Ditto, 4th Division ...	1,610	847	...	13	...	357	...	...	...	2,827	
Ditto, 5th Division ...	1,763	260	...	...	...	...	...	72	...	2,095	
Lower Chenab Canal, Khanki Division ...	7,677	420	...	...	11,236	5,120	3,185	311	15,130	48,079	
Ditto, Lyallpur Division ...	5,732	...	...	...	12,314	2,079	6,338	1,827	6,917	35,207	
Ditto, Lower Gugera Divi- sion.	6,492	...	...	...	28,912	402	2,639	...	...	38,445	
Ditto, Upper Gugera Divi- sion.	5,620	...	133	124	18,419	1,553	7,696	1,071	8,607	43,223	
Ditto, Jhang Division ...	15,621	...	...	...	6,894	...	7,470	...	614	30,599	
Ditto, Burala Division ...	5,212	26	...	64	10,493	3,886	5,545	3,930	7,568	36,719	
Upper Jhelum Canal, 1st Division ...	784	...	17	465	114	611	202	241	...	2,434	
Ditto, 2nd Division ...	...	...	283	1,380	738	1,403	92	...	938	4,834	
Ditto, 3rd Division ...	...	...	...	...	1,583	2,765	832	...	420	5,600	
Ditto, 4th Division ...	736	788	...	...	1,421	1,182	395	725	...	5,247	
Ditto, 5th Division ...	238	...	36	149	1,199	...	222	217	148	2,209	
Railways and Quarries Division ...	...	...	...	...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division ...	9,680	...	...	...	6,125	1,726	5,917	588	5,707	29,743	
Ditto, 2nd Division ...	9,457	281	2,587	...	7,326	2,034	21,626	7,467	16,336	67,114	
Ditto, 3rd Division ...	5,591	498	...	...	22,358	5,752	6,436	...	5,338	45,973	
Shahpur Inundation Canals ...	...	...	...	...	...	...	...	...	...	...	
Total for 1908-09 to 1910-11 ...	1,98,540	6,956	11,379	6,337	2,28,378	79,136	1,25,432	36,365	93,167	7,86,190	
Total for 1905-06 to 1907-08 ...	1,79,566	15,863	5,945	4,952	1,65,622	1,13,096	95,196	55,350	52,222	7,09,445	

STATEMENT No. VI (c).

EXPENDITURE ON ARBORICULTURE IN THE PROVINCIAL DIVISIONS
DURING THE TRIENNIAL PERIOD 1908-09 TO 1910-11.

1	2	3	4	5	6	7	8	9	10	11	12
DIVISION.	WORKS.								ESTAB- LISH- MENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rawalpindi Division	162	...	439	240	158	...	850	1,783	13,953	17,590	
Simla Division	...	...	...	...	...	...	...	...	...	...	
Kangra Division	...	...	250	...	...	...	9,904	...	...	10,154	
Lahore Division No. I	...	...	...	1,000	...	...	...	3,878	...	4,878	
Jullundur Division	...	...	925	219	100	...	3,780	3,009	377	8,410	
Lyallpur Division	2,300	...	1,020	330	...	...	11,463	1,670	634	17,422	
Shahpur Division	...	...	...	...	...	2,716	...	...	...	2,716	
Multan Division	...	...	...	...	3,878	...	...	...	...	3,878	
Ambala Division	489	...	3,817	740	...	...	13,384	1,660	510	20,600	
Delhi Division	...	...	1,225	...	...	...	6,652	...	...	7,877	
Lahore Division No. II	...	...	600	84	...	...	1,740	600	444	3,468	
Total for 1908-09 to 1910-11 ...	2,951	...	8,276	2,613	4,136	2,716	47,773	12,600	15,923	96,993	
Total for 1905-06 to 1907-08 ...	4,120	206	4,902	3,583	5,710	20	36,814	16,596	2,726	74,677	

**Corrigendum to the Punjab Triennial Arboriculture Report for
1911-12 to 1913-14.**

Page 18.

Delete the remark in the last column of the statement against Multan District
and *substitute* " Plan for 1914—17 approved by the Commissioner."

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1911-1912 to 1913-1914.

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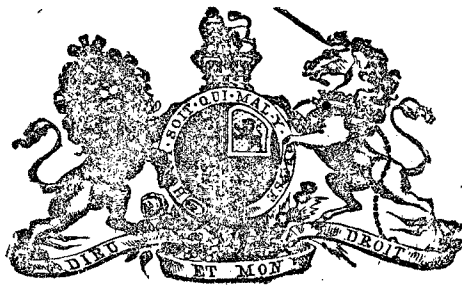
PROGRESS REPORT

ON

ARBORICULTURE IN THE PUNJAB

FOR THE TRIENNIAL PERIOD

1911-1912 TO 1913-1914.



Lahore:

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB.

1914.

*Proceedings of His Honour the Lieutenant-Governor of the Punjab in the
Forest Department, No. 263, dated the 20th May 1915.*

READ—

The Progress Report on Arboriculture in the Punjab for the triennium 1911-12 to 1913-14 submitted with the letter from the Conservator of Forests, Punjab, No. 5018, dated the 8th January 1915.

REMARKS.—True to past tradition the report has again been received several months late. The delay is the less excusable now that progress in arboriculture is also mentioned in the annual reports of district boards, and statistics and material for the triennial reports should be ready to hand and compiled without difficulty. His Honour also notices with regret that in spite of clear orders, which have been issued prescribing the preparation of a proper working plan, a number of districts appear to have overlooked the instructions. He will be glad if Commissioners will enquire into the causes of delay in the submission of reports from the districts in their divisions, and will take measures to ensure compliance with the orders of Government.

2. The increase in mileage of district board and municipal roads planted up has been only 354·04 or 1·12 per cent., and there are still over 6 000 miles to be planted. This rate of progress can hardly be termed satisfactory in view of the increased facilities for tree-planting given by the extension of canal irrigation. The principal increases have been in the districts of Shahpur, Multan, Ambala, Rawalpindi, Gujrat, Gurdaspur, Kangra and Sialkot. The district board of Sialkot maintains its reputation for enthusiasm in arboriculture, and planted successfully 100 miles of avenues during the triennium. In Karnal roadside arboriculture seems to have been entirely neglected. His Honour notices that the Attock District is one that claims that the whole length of 11½ miles planted during the triennium has been successful, but his observations on a recent visit to Attock do not agree with that conclusion. Several boards are experimenting with eucalyptus, and others are endeavouring to improve their operations by the appointment of trained arboricultural experts as supervisors or inspectors. Otherwise the reports do not disclose any new experiments or new ideas.

3. It is satisfactory to observe that financially the tree-planting operations of districts have been more successful than usual, and that the deficit has been reduced to Rs. 2,50,588. Only a small number of local bodies, however, are able to show a profit, and sufficient attention is not yet paid to the financial aspect of the subject. Even in districts which work on a properly prepared planting plan, want of efficient supervision and of expert advice detract from the success of planting operations, but it is even more in felling operations that arrangements appear to be inadequate. It is to fellings that the boards must look for a return on their expenditure, and a fixed programme of work in this direction is just as necessary as in the case of planting.

4. The division of districts into classes, arid, very dry, dry or fairly moist seems to be now an anachronism in view of the extension of canal irrigation, and the Lieutenant-Governor would be glad to have the Conservator's opinion as to whether it should be retained. The inclusion of statistics regarding the Delhi Province and Delhi municipality is also no longer necessary.

5. On canals and canal roads the length of avenues has increased by 1,857·65 miles, whilst the percentage of failures has fallen from 27·83 to 16·57. There has, however, been an increase of over a lakh and-a-half in expenditure, and the deficit on the year's working amounted to Rs. 5,19,565, the greater part of which occurs, as is natural, on the new canals, where sufficient time has not elapsed to allow any return on the expenditure. A comparison of the arboriculture on the old and new canals is in some respects not favourable to the latter. The Lieutenant-Governor is inclined to think that there has been too great a restriction in the species planted, and the practical exclusion of nearly all varieties except the shisham and the kikar detracts from the shade-giving and sylvan amenities which are so marked a feature of the older canals.

6. Of 945·27 miles of roads suitable for tree-planting under the Buildings and Roads Branch of the Public Works Department, 800·30 miles are reported to be fully stocked with trees. The length of road successfully planted amounted to 131·91 miles, a considerable improvement on the figures of last triennium. The results attained appear to be very unequal. For instance the filling-up of gaps in the Grand Trunk Road is being carried out much more successfully in the Jullundur District where canal water is not available than in Amritsar and Lahore where the canal cuts often run parallel with the road. Financially, the results have been less successful, the deficit amounting to Rs. 40,805 as compared with Rs. 4,835.

7. The total revenue derived from arboriculture was Rs. 14,47,812, the expenditure Rs. 22,58,770, leaving a deficit of Rs. 8,10,958 as compared with Rs. 8,02,417 for the period 1908-09 to 1910-11 and Rs. 6,13,937 in 1905-06 to 1907-08. This continual increase in the deficit is unsatisfactory. The expenses of establishment are no doubt continually rising, but, on the other hand, with the great improvements in the supply of water, conditions are much more favourable to successful planting than they were, and His Honour has no hesitation in saying that the amount of unprofitable expenditure now recorded might, with proper care, be much reduced. He would commend to the notice of district officers and Executive Engineers a new hand-book on roadside arboriculture, prepared under the orders of Mr. Casson, Commissioner of Lahore, which is shortly to issue and which contains many valuable suggestions on the subject. With the exception of a few specially favoured submontane districts the Punjab as regards roadside arboriculture compares very unfavourably with other Provinces of India. Whatever excuse there may have been for this in the past, it has now largely disappeared with the great extension of canal irrigation, and the Lieutenant Governor would like to see those facilities more fully utilised not only by local bodies, but by both Branches of the Public Works Department. He would also suggest to all interested in arboriculture the expediency of attempting more variety in new plantings. The spread of the eucalyptus has already been marked, but there are many other good shade-giving and ornamental trees, such as the *nim*, *toon*, *kachnar*, *terminalia millingtonia* as well as the *mango* and various fig species which might be planted much more freely than at present, and would form a pleasant contrast to the monotonous if profitable shisham.

ORDER.—Ordered that the above remarks be printed and circulated with the report as usual; also that they be published in the *Punjab Government Gazette*, and forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, the Conservator of Forests, Punjab, and all Commissioners in the Punjab.

By order of His Honour the Lieutenant-Governor of the Punjab,

J. P. THOMPSON,

Revenue Secretary to Government, Punjab.

No. 5018.

FROM

R. MCINTOSH, ESQUIRE, M. A., I. F. S.,
Conservator of Forests, Punjab.

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF THE
PUNJAB.

Dated Lahore, the 8th January 1915.

SIR,

I HAVE the honour to submit the Progress Report on Arboriculture in the Punjab for the period 1911-12 to 1913-14. The arrangement of the subject is the same as in the previous report.

2. This report was due to Government on the 1st September 1914, but has been delayed on account of late receipt of reports from most of the officers concerned. Out of 85 reports only 8 were received on the due date, viz., 1st July 1914, and the remaining 77 were received as follows.

On different dates in July	...	...	...	...	16
In August 1914	...	...	...	...	47
In September 1914	...	...	...	...	12
In October 1914	...	...	...	...	2

Numerous objections were issued and the replies to some of them were received so late as 18th November 1914.

I have the honour to be,

SIR,

Your most obedient servant,

R. MCINTOSH,

Conservator of Forests, Punjab.

Progress Report

ON THE

Arboriculture in the Punjab

For the triennial period 1911-12 to 1913-14.

A.—District Arboriculture.

District Boards and Municipalities.

(a).—GENERAL.

1. The total length of avenues under the district boards and some municipalities in the Punjab at the commencement of the period under review was 9,014 miles and at its close 9,368 miles, showing an increase for the triennial period of 356·04 miles as compared with an increase of 711·71 miles during the previous triennial period.

2. The total length of roads suitable for planting up with avenues is 15,251·42 miles, out of which 60·30 per cent. had been planted up prior to the beginning of the period under review. The increase during the period was 1·12 per cent. making a total of 61·42 per cent.

3. Statement No. IV (a) shows the progress and changes in the avenues in each district, from the perusal of which it will be seen that the net increase of 356·04 miles for the period under report is made up as follows:—

Additions.

			Miles.
(i)	Corrections of previous figures	...	106·02
(ii)	Successfully planted	...	885·07
(iii)	Transferred from other management	...	58·10
(iv)	Other causes	...	0·09
	Total	...	1,049·28

Deductions.

(i)	Corrections of previous figures	...	172·42
(ii)	Failures	...	210·92
(iii)	Felled	...	67·48
(iv)	Transferred to other management	...	232·73
(v)	Other causes	...	11·69
	Total	...	695·24

Net increase ... 354·04

4. As mentioned in paragraph 4 of last triennial report all districts show that the length of avenues planted exceeded the length of failures. It is also satisfactory to note that in several districts in which considerable lengths of avenues were planted there were no failures, *i.e.*, Sialkot (100 miles), Kangra (54 miles), Lahore (13 miles), Attock (11 miles), Jullundur (8 miles) and Hissar (6 miles).

5. In the following districts and municipalities no planting of avenues was carried out during the triennial period under report:—

Gurgaon, Karnal and Lyallpur Districts and Jhang, Karnal and Amritsar Municipalities.

6. Shahpur and Attock Municipalities, with a total length of 21·41 miles suitable for avenues, are the only ones which show that all their roads have been completely planted up with avenues.

7. For the purpose of arboricultural returns the districts are classified in the following four groups :—

- (i) *Arid districts*.—Including Muzaffargarh, Multan, Dera Ghazi Khan, Mianwali, Montgomery, Jhang, Lyallpur, Shahpur, Hissar.
- (ii) *Very dry districts*.—Comprising Ferozepore, Rohtak, Lahore, Karnal.
- (iii) *Dry districts*.—Comprising Jhelum, Gujranwala, Gurgaon, Amritsar, Delhi, Jullundur, Ludhiana, Rawalpindi, Attock.
- (iv) *Fairly moist districts*.—Comprising Gujrat, Gurdaspur, Ambala, Sialkot, Hoshiarpur, Simla, Kangra.

An examination of the results in the above groups of districts gives the following figures for the period under review :—

Arid districts.—223·23 miles were successfully planted up and 28·55 miles failed. The total length planted up to date is 2,438·28 miles out of a total length of 4,843·97 miles of roads, so that 50 per cent. of the length still remains to be planted up.

Very dry districts.—Planting was successful over 59·24 miles and unsuccessful over 12·64 miles. Of 2,351·86 miles of roads suitable for planting 1,434·82 miles were under avenues at the close of the triennial period, leaving a balance of 917·04 miles or 39 per cent. remaining to be planted.

Dry districts.—272·18 miles were successfully planted and 125·75 miles failed. Of 4,436·40 miles of roads suitable for planting there were 2,353·99 miles under avenues at the close of the period, while 2,082·41 miles or 47 per cent. remained unplanted.

Fairly moist districts.—330·42 miles were successfully planted and 43·98 miles failed, but out of 3,619·19 miles of roads suitable for planting, 3,140·95 miles were under avenues at the close of the period under report, while only 478·24 miles or 13 per cent. were still to be planted.

8. The area under groves at the commencement of the triennial period was 4,877·09 acres and at the close of the period 4,883·48 acres, showing an increase of 6·39 acres as compared with an increase of 53·78 acres during the previous triennial period.

The details of the changes which took place in each district are given in Statement III (a).

The following table shows an analysis of this statement :—

<i>Additions.</i>		Acres.
Correction of figures		4·75
Successfully planted		30·73
Transfers from other heads		31·01
Transfers from other management		119·49
Other causes		2·04
Total		188·02
<i>Deductions.</i>		
Correction of figures		12·04
Failures		35·96
Transfers to other management		57·44
Other causes		76·19
Total		181·63
Net increase		6·39

From the above figures it will be seen that the actual area successfully planted was 30·73 acres, and that over which operations failed was 35·96 acres, as

compared with 43·45 acres successfully planted and 10·14 acres failed during the previous triennial report. The increase in the total area under groves is, therefore, purely a paper increase, due to the transfer of certain areas from Canal to District management. Rawalpindi District shows under failures some clumps of trees which had been blown down by wind and which were subsequently sold and Muzaffargarh shows 7·25 acres failure on account of an old garden which had been destroyed.

The following districts show the greatest measure of success:—

Karnal, Muzaffargarh and Mianwali.

9. At the beginning of the triennial period there were 1,811·84 acres under plantations and at the close of the period 1,080·61 acres, showing a net decrease of 731·23 acres.

Details of the operations carried out in each district are shown in Statement II (a) appended to this report.

The decrease of 731·23 acres is made up as follows:—

<i>Additions.</i>				Acres.
Corrections of previous figures	...	...	...	204·25
Successfully sown or planted	...	...	...	24·72
Transferred from nurseries and groves	...	...	...	6·68
Total				235·65
<i>Deductions.</i>				
Failures	...	...	...	16·15
Transferred to other management	...	...	...	950·73
Total				966·88
Net decrease				731·23

There was, therefore, a real increase of 8·57 acres in the area stocked.

The large decrease in the area under district management is accounted for by the transfer of 938·73 acres to the notified areas committee, Delhi.

10. At the commencement of the period under report the area under nurseries was 278·16 acres, and at its close 1,326·80 acres, showing a net increase of 1,048·64 acres which is accounted for as follows:—

<i>Additions.</i>				Acres.
Corrections of previous figures	...	...	...	0·50
Extension of nurseries	...	...	...	58·57
Transfer from other management	...	...	...	1,063·42
Total				1,122·49
<i>Deductions.</i>				
Corrections of previous figures	...	...	...	0·53
Failures	...	...	...	12·48
Transfer to groves or plantations	...	...	...	40·65
Other causes	...	...	...	20·19
Total				73·85
Net increase				1,048·64

Of the plantations begun during the year 58·57 acres succeeded and 12·48 failed, so that there was a real increase of 46·09 acres under this head.

The increase of 1,063·25 acres in the area under district management occurred in the Shahpur District, the area being received from the Canal Colony.

(b).—DETAILS OF THE WORK DONE.

Arid Districts.

11. *Muzaffargarh*.—The length of avenues was increased by 35·59 miles during the triennial period under report in which 20,797 trees were planted. The deductions were mainly due to water-logging and dust-storms. Planting work was begun on three new roads in the period under report. As recorded in the last report no permanent nurseries were maintained, but temporary nurseries were established in District Board gardens and on private lands lent by the owners near wells. These were sufficient to meet all requirements. The number of standing trees over three years of age was 63,035 and their value is estimated at Rs. 4,41,245, estimated at Rs. 7 per tree.

Multan.—The length of avenues was increased during the period under report by 93·19 miles. The principal deduction, that of 15·30 miles, was due to correction of previous returns and some 9·74 miles to failures.

Dera Ghazi Khan.—The length of roads suitable for avenues was increased by 9 miles. This is the road from Dera Ghazi Khan to Kot Chutta and the first two miles will be planted this winter. The two miles of Choratta road planted in 1911-12 are doing well, though there has been the usual difficulty with camels and stray cattle.

Mianwali.—The increase of 37 mile during the period under avenues represents length of avenues planted along the Station Bazar Road at Kundian. The existing avenues were maintained and gaps in them were filled as they occurred. The increase of 203 acres under plantations is due to the correction of the figures given in the previous report.

The station gardens at Mianwali and Sakesar continue to be maintained with care. The Nammal Band scheme has been completed and the canal now is in working order. The canal promises to offer favourable conditions for tree planting at Mianwali and Musa Khel. It is hoped to add a sufficient number of fruit trees in the gardens at both these places in the near future. The Public Works Department is at present in charge of the canal and may plant avenues along it. Last year shisham and other plants were supplied to that department free of cost from the Chak Lawa and the nurseries in the station garden. Mianwali for planting along the canal, but they are reported to have failed.

Montgomery.—The avenues were increased by 8 miles during the period under report, and there were no failures.

Jhang.—During the triennial period 13·75 miles were newly planted out by the district board and 5 miles were replanted in place of those which failed during the last triennial period. Out of the above length, 5·50 miles are not yet properly established. The planting of trees has also been extended to the district board dispensaries, schools and rest-houses. The temporary nurseries which had previously been maintained by the villagers in the Chenab Canal Colonies were discontinued, and their place was taken by 2·39 acres of permanent nurseries planted and maintained by the district board.

Lyallpur.—During the period under report there was an increase of 25·50 miles of avenues due to correction of previous figures. The expenditure incurred amounted to Rs. 37,948 and that on establishment was Rs. 12,069, total Rs. 50,017, against Rs. 94,688, incurred during the last triennial period. The decrease in expenditure appears to be due to the fact that no new work has been attempted during the period under report. No further information than can be obtained from the tabulated statements has been received from this district.

Shahpur.—50·05 miles of avenues were successfully planted during the period under report and 2·5 miles failed. 60,000 new trees were planted either on new roads or in the gaps on the old roads through the agency of *beldars* which cost the district board no extra expenditure. The failures were about 5 per cent. only. Heavy work of tree plantation in the colony area warranted an increase in strength of the arboriculture staff by one Naib Darogha and 65 *Beldars*.

Special efforts were made to plant trees on parts of roads in Khushab Tahsil where the planting and maintaining of the trees was difficult owing to scarcity of water. For this work three extra gangs of Beldars were engaged and they have done the work successfully.

The trees have been numbered and a systematic record thereof has been maintained to prevent theft.

New gardens were started at the rest-houses at Phularwari, Bhalwal, Sillanwali, and Sargodha itself at the district board office and the head-quarters hospital.

Hissar.—6·30 miles of avenues were successfully planted during the period under report by the district board: there were no failures. 3·37 miles of avenues were added by the municipality. Hansi town being the most fortunate in the district in the matter of canal water-supply 571 shisham trees were planted on the roadsides by the municipality of which 85 died and the rest are flourishing. In Bhawani, where canal water is very limited, the municipality planted 350 young trees, but only 30 or 40 have taken root, on account of the failure of the monsoon.

Very dry districts.

Ferozepore.—19·12 miles of avenues were successfully planted during the period under report, besides gap fillings on various roads, but 7·89 miles failed. The main causes of failure were want of sufficient water, frost, cold, the sandy and porous nature of the soil which renders it unsuitable for arboriculture. Cattle and rats also did considerable damage. Of land there was no change in the areas under groves and nurseries. Fifteen acres were planted with trees, about half of which are in good condition and the remaining failed for want of sufficient water.

The total expenditure amounted to Rs. 60,063 during the period under report against an income of Rs. 74,702, showing a net gain of Rs. 14,639 to the board.

As about 80 per cent. of the total length of roads has been planted up, the condition of arboriculture in this district is very satisfactory. There is now 1 Darogha in each of the five tahsils, and one Head Tree Darogha for the whole district. Five of these men have been trained at Changa Manga during the last year.

Rohtak.—11·37 miles of avenues were planted during the period, of which 2·25 miles failed owing to scanty supply of water and rainfall. 11,432 trees were planted as compared with 10,128 in the previous triennium. The number of the trees that died was 2,823 against 3,891 in the previous period. Over 500 eucalyptus plants were planted out in the civil station, rest-houses compounds, &c., and some were experimentally planted in the flooded Dahr tract of Jhajjar Tahsil. If these survive, more will be planted. These trees at first suffered from white ants, but later the use of dilute sanitary fluid appears to have rendered them immune from this pest. A further record of the history of this experiment will be of considerable interest. The trees standing on the district board roads have been valued at Rs. 54,365. The income during the period under report was Rs. 15,337 and the expenditure Rs. 46,001 as compared with Rs. 8,378 and 33,874, respectively, for the previous triennium. The increase was partly due to attempts having been made to the re-stocking of the old gardens. But another large item was Rs. 2,025 spent on iron guards for trees planted in the avenues. These provide no doubt a more effective protection than branches of thorn trees, but it is questionable whether the advantage gained is proportionate to the cost.

Lahore.—Under the District Board 12·75 miles of avenues and 2·97 acres of nurseries were successfully planted during the triennial period: there was no failure. 16·00 miles of avenues were successfully planted in the Lahore Municipality. 5,207 trees of pipal, shisham and arjan were planted, of which 673 failed owing to the severity of the winter of 1911. During the triennial period the municipality spent Rs. 1,08,211 on

arboriculture and landscape gardening against Rs. 53,574 spent in the last period. This includes the amount spent on the city gardens, the work in which is still being carried on and is likely to be completed by the end of March 1916. The income amounted to Rs. 26,392 against Rs. 19,764 during the previous three years.

Karnal.—No new operations in tree-planting were carried out during the period under report. The work was confined to filling of gaps in avenues previously planted. 3,074 trees were planted and 4,396 died or were blown down during the triennium. The central nursery at Karnal was able to meet all the ordinary requirements of the district. But in addition to the output of this, some 860 eucalyptus were procured from Lahore. Of these some 400 died, 150 have been planted successfully in the Civil Station at Karnal, and the remainder have been placed in the nursery for plantation when required.

Dry Districts.

Jhelum.—14.18 miles of avenues were planted by the District Board during the period under report, out of which 4.86 miles failed. The number of trees planted amounted to 3,744, of which 1,284 failed. During the same period 7.28 miles were planted by the Jhelum Municipality, of which 4.14 miles failed.

Gujranwala.—34.12 miles of roads were planted during the triennial period, of which 2.50 failed. In addition about 15,000 gaps were filled. On the suggestion of the Commissioner an experiment is being made with eucalyptus, with a view to the utilization of this species for planting in the gaps of the road, while slower growing but more suitable species for roadsides are maturing.

An experiment of a similar nature has been made on the Khangah Dogran-Chucharkana Road, where the existing trees have been interplanted with kikar in order to make the avenues more complete. The Commissioner makes the further suggestion that if the kikar fails eucalyptus may be tried, but it does not seem likely that the latter species will succeed where kikar fails. It should be remembered that some form of protection from white ants is likely to be necessary for eucalyptus. The Malta Oranges supplied by the Director of Agriculture, Punjab, in 1905 have been most successful and the fruit has been abundant and profitable. Some cuttings of these trees have been grafted on katta and sweet lemon trees, but the result cannot as yet be recorded.

Gurgaon.—There was an increase of 0.19 acre under nurseries and there was no failure. No new work has been done under avenues, plantations and groves, but gaps in existing avenues were filled up as required. 11,058 trees were planted against 21,379 planted during the last triennium.

Amritsar.—Avenues were planted along 43.49 miles during the period under report, of which 23.50 miles failed, and dead trees along 10.85 miles were felled, thus making a net addition of 8.64 miles of avenue. The large proportion of failures is mainly attributable to the browsing of passing cattle, of which 3,142 were impounded during the year. The protection of the young plants by means of branches of kikar or some similar species should be attempted.

In the Amritsar Municipality no new work under avenues, groves and plantations was carried out during the period under report.

Delhi Province.—The period under report was on the whole unsuccessful owing to the scarcity of rain. 77.10 miles of avenues were planted along roads, of which 66.50 miles failed owing to the want of rain. 113.45 miles were transferred to Gurgaon and Rohtak Districts on the formation of the new Delhi Province in 1912 and 4.62 miles were felled, showing a net decrease of 108.97 miles. 9.05 acres were planted, but 8.65 acres failed due to scarcity of rainfall. An attempt to sow kikar seed *in situ* failed entirely and it is extremely doubtful whether direct sowings will ever succeed when so much depends on the rainfall.

Delhi Municipality.—Towards the end of the triennial period the area to the north of the city which comprises the whole of the civil lines, and the area under the ridge now under afforestation was taken over from the municipality by the notified area committee. This relieved the municipality of practically the whole of the arboriculture work in Delhi.

Jullundur.—8.25 miles of avenues were successfully planted during the triennial period. No new work was done under groves, plantations and nurseries.

The financial results show a surplus of Rs. 16,291 on an expenditure of Rs. 33,837. Some 90 per cent. of the total length of the avenues have been successfully stocked. Under these circumstances it is time that a scheme for the replacement of the old stock by young trees was prepared, in order that a steady income may be assured.

Ludhiana.—Three miles of avenues were successfully planted, of which 0.25 mile failed owing to scarcity of water and to white ants. 2.21 acres of nurseries were established. In 1911 under the advice of the Director of Agriculture 60,000 mulberry cuttings were obtained from the Government Horticultural Gardens, Lahore. Some of these were distributed amongst the nurseries in the District, and some amongst the villagers for planting round wells. On the whole this species has not succeeded. A very large proportion of the trees given to the villagers failed entirely. Further, when attempts have been made to utilize mulberry for avenues it has been found that passing animals eat the fruit and leaves and there is no local use for the timber, as it is useless for firewood. Although it is a good tree from the point of view of shade, it cannot in general be considered a species of value for arboriculture.

The Shisham and Pipal hitherto used are likely to be more generally serviceable.

Rawalpindi.—89 miles of avenues were planted during the triennium of which 24 miles failed for want of proper irrigation, as water is scarce in the district, and 5 miles were felled, showing a net increase of 60 miles. 1.22 acres of groves were successfully planted and there was a decrease of 23.38 acres, which is due to the sale of some clumps of trees which had died or been blown down by the wind. 0.96 acre of nurseries were established, of which 0.46 acre failed on account of scarcity of water.

Rawalpindi Municipality.—Two miles of avenues and 0.50 acre of groves were successfully planted during the period under report, there being no failure.

Attock.—11.50 miles of avenues were successfully planted by the District Board during the triennium and gaps were also filled up in about $5\frac{1}{2}$ miles of the roads. It is impossible to carry on the planting on any large scale without a very large expenditure of money owing to the arid nature of the soil. The question of nurseries is particularly difficult on this account. The local nurseries were insufficient even for the $11\frac{1}{2}$ miles planted and nearly half the trees had to be bought from Shahpur. Taking into consideration the undoubted progress that has been made in the face of all difficulties, the reduction in expenditure of Rs. 4,963 is very satisfactory.

Fairly Moist or Forest Districts.

Gujrat.—83.61 miles of avenues were successfully planted during the triennium and the total decrease, during the same period, amounted to 54.54 miles, in which are included 29.60 miles over which planting failed on account of drought, storms and frost. Groves show a net increase of 2.90 acres. 2.78 acres of nurseries were established and the total decrease amounted to 9.15 acres, of which 2.98 acres were failures due to drought and frost.

Financially the period was successful since, if the expenditure on gardens, which are not intended to be remunerative, be excluded, there was a surplus of Rs. 6,314.

Gurdaspur.—The length of avenues was increased by 72·89 miles, of which 4·50 miles failed. Some 30,000 shisham, mango, jamun and mulberry were planted out, of which 18 per cent. died owing to scarcity of water. The mulberry, though not suitable in this district for roadside avenues, is now freely planted in connection with the renewal of the silk industries: while experiments are again about to be tried in interplanting the eucalyptus to fill blanks on old avenues. Two small nurseries of 0·50 acre were established, but the one in the tahsil of Batala has been closed since the close of the period under report, as it did not serve its purposes. There was no change in the area under groves.

The expenditure during the period has increased from Rs. 16,707 to Rs. 28,407, owing to the employment of a Superintendent of Arboriculture and more numerous establishment. The receipts show a decrease of Rs. 1,715 owing to a tendency to sell trees at very low rates, a tendency which it is to be hoped will be corrected with the better supervision introduced with the increase in establishment.

Ambala.—The length of avenues was increased by 50·73 miles of new planting and 10·98 miles by correction of the previous figures during the period under report, of which 6·59 miles failed and 3·28 miles were felled. 23,963 trees were planted out along roadsides, of which 14 per cent. failed. 4·54 acres were added to the groves, and there was no decrease. 2·06 acres of new nurseries were established, of which 0·08 acre, which was sown with shisham seed, failed for want of watering. 1·79 acres were transferred to groves and 2·88 acres were given up.

A Superintendent of Arboriculture has been re-engaged from September last to supervise the arboriculture operations. The man selected holds a Diploma of the Lyallpur Agriculture College.

The expenditure rose by Rs. 5,930, but this is more than compensated by an increase of nearly Rs. 8, 000 in the receipts.

Sialkot.—During the period under report 100 miles of avenues were successfully planted, without any failure. Though the severe storm of 1913 did considerable damage to trees, it did not reduce the mileage. Shisham and kikar are the principal trees planted and show the best result, but a large number of mangoes have been put down where they are expected to do well. 144·70 miles were reduced, due to correction of previous figures, and 1·60 miles transferred to Sialkot Municipality. The area under groves is reduced by 25 acres due to Belas being made over to the zamindars who are the owners of the land on which the trees are growing. 15·85 acres of new nurseries were established and there was no failure. There was no change in the area under plantations.

The financial results as before were excellent, despite a large increase in expenditure owing to an increase of the amount of work undertaken.

Hoshiarpur.—16 miles of avenues were successfully planted during the period under report, of which 3 miles failed on Hajipur-Daulatpur Road in Dasuya Tahsil. In spite of supervision the young plants were destroyed by the owners of the adjoining fields as the shade of the trees damaged their crops. Special attention has been paid to the protection of the young plants from browsing for which purpose screens of cactus and branches of thorn trees have been utilized.

While expenditure has remained more or less stationary, there has been a very satisfactory increase in the receipts owing to good sales of lac and lopping, the thinning out of useless trees in the avenues and better general supervision of the sales. The retention of a retired Forest Ranger as Arboricultural Superintendent has probably contributed much to this excellent result.

Simla.—There was no change in the area under Mahasu orchards and nursery.

Kangra.—53·62 miles of avenues were successfully planted during the triennium without any failure. The trees in 13·75 miles were felled and sold. The area under groves shows a net decrease of 6·45 acres. 1·67 acres have been taken on lease for five years for the extension of the District Board gardens at Dharamsala and the District Board garden at Kangra was given on rent for five years.

(C)—FINANCIAL RESULTS.

12. The gross revenue from arboriculture trees during the period under report amounted to Rs. 9,41,418 or Rs. 1,72,130 in excess of that realised in the previous triennium, while the expenditure was Rs. 11,92,006 or Rs. 29,579 in excess of that incurred in the previous triennial period.

For the triennial period under report the deficit was Rs. 2,50,588 or Rs. 1,42,551 less than the previous period, as mentioned in last triennial report. The highest gross revenue was realised in the Sialkot District with Rs. 1,09,014, while Hoshiarpur realised Rs. 94,746, Shahpur Rs. 80,115, Ferozepore Rs. 74,702 and Rawalpindi Municipalities Rs. 73,708. The other districts, which show a gross revenue between Rs. 30,000, and Rs. 50,000 are Muzaffargarh, Jullundur, Gujrat, Gurdaspur and Lahore and Amritsar Municipalities.

The following districts and municipalities show a surplus on their arboricultural operations :—

Sialkot, Hoshiarpur, Jullundur, Shahpur, Simla, Dera Ghazi Khan, Ferozepore, Delhi Province and Rawalpindi Municipality.

B.—Canal Arboriculture.

13. During the triennial period under report the length of roads and canals suitable for avenues increased from 9,102 miles to 10,596 miles. Statement No. IV (b), appended to the report, shows total additions of 1,857·65 miles of avenues as compared with 1,067·58 miles during the previous period. This total is made up as follows :—

	Miles.
Correction of figures	253·05
Successfully planted	1,184·00
Transferred from other management	405·90
Other causes	14·70
Total	1,857·65

The length of avenues successfully planted was 1,184·00 miles against 789·80 planted in the three years 1908-09 to 1910-11. Planting was successfully carried out over a length of more than 50 miles in the following Divisions :—

Lower Bari Doab Canal, II Division, Dera Ghazi Khan, Muzaffargarh, Upper Jhelum Canal IV Division, Lower Gugera, Lower Jhelum Canal II and III Divisions, Upper Chenab, III Division.

14. The total deductions amount to 936·26 miles and are due to—

	Miles.
Correction of figures	288·50
Failures	196·19
Felled	45·25
Transferred to other management	397·24
Other causes	9·08
Total	936·26

The failures amounted to 196·19 miles as compared with 219·82 during the previous triennium and the percentage of failures amounted to 16·57 miles

against 27·83 in the previous period. The period under report has, therefore, been satisfactory as compared with the previous triennium, in that there has been an increase in the area successfully planted and a decrease in the length of failures.

15. There are no groves under the Irrigation Department.

16. The additions to the areas under plantations belonging to the Irrigation Department during the triennial period under report are as given below :—

	Acres.
Corrections of area	218·92
Successfully sown or planted	3,161·44
Transferred from nurseries, etc.	621·05
Transferred from other management	2,147·53
Other causes	16·57
Total	6,165·51

The area successfully planted during the period shows an increase of 920·99 acres over 2,240·45 acres planted in the last triennium.

17. The deductions during the period under report were as follows :—

	Acres.
Corrections of areas	542·99
Failures	1,272·04
Transferred to other management	2,610·46
Transferred to other heads	10·65
Other causes	323·85
Total	4,759·99

1,272·04 acres failed as compared with 712·09 acres in the previous triennium and the percentage of failures comes to 40·23 per cent. against 31·78 per cent. of failures in the previous period. About half of the failures occurred in Upper Jhelum Canal I, III, IV and V Divisions and were chiefly due to poor soil and insufficient rainfall. This subject was touched on in the last report and it was understood then that farash was to have been used in places where the poverty of the soil prevented other species succeeding. This, however, does not appear to have been done to any large extent.

18. The areas under nurseries decreased from 74·86 acres to 28·05 acres. The main decrease is under the head “transfer to groves or plantations.”

19. The income during the triennial period amounted to Rs. 4,21,403 as compared with Rs. 3,81,747 in the previous triennium. The corresponding figures for the expenditure are Rs. 9,40,968 and Rs. 7,86,190 in the two periods respectively. The deficit has risen from Rs. 4,04,443 to Rs. 5,19,565, and most of it was in the Upper Jhelum Canal, Lower Jhelum Canal, Upper Chenab Canal, and Lower Chenab Canal Divisions. The following divisions show a surplus in their arboriculture operations :—

Upper Bari Doab Canal, I Division, Muzaffargarh, Western Jumna Canal, Delhi and Hissar Divisions and Sirhind Canals, Ferozepore, Ludhiana and Patiala Divisions,

C.—Arboriculture in Provincial Divisions (Public Works Department).

20. Statement No. IV (c) shows that 325·42 miles of avenues as detailed below were added during the period under report :—

	Miles.
Correction of figures	11·85
Successfully planted	131·91
Transferred from other management	23·25
Other causes	158·41
Total	325·42

The deductions during the same period were :—

	Miles.
Correction of figures	82·64
Failures	14·36
Felled	5·92
Transferred to other management	15·57
Other causes	159·29
Total	277·78

131·91 miles of new avenues were planted during the triennial period as compared with 80·80 miles in the previous period, whereas failures amounted to 14·36 miles against 10·52 miles in the previous period.

21. As shown in Statement No. III (c) the area under groves at the commencement of the triennial period was 642·55 acres : at the end of the same period 638·07 acres.

22. Statement No. II (c) shows the changes under the head plantations during the triennium.

23. The area under nurseries at the beginning of the period under report was 30·95 acres and that at the end of the period 15·18 acres. Statement No. I (c) shows the details and reasons for the changes.

24. The revenue of the period under review amounted to Rs. 84,991 as compared with Rs. 92,158 in the previous triennium, while the expenditure was Rs. 1,25,796 against Rs. 96,993, thus showing a deficit of Rs. 40,805 during this period against Rs. 4,835 in the previous period. The increase in expenditure is mainly accounted for by a large increase in Rawalpindi in establishment (Rs. 8,743) and in Ambala in the amount of new plantation work undertaken (Rs. 10,014). Lahore II, Jullundur and Multan are the only Divisions which show a surplus.

26. *General.*—The following table shows in a concise form extensions and failures which have taken place in the avenues, groves and plantations under all kinds of management during the period under report as compared with previous triennium :—

	1911-12 to 1913-14.		1908-09 to 1910-11.	
	Planted.	Failed.	Planted.	Failed.
Avenues (miles)	2,200·98	421·47	1,829·58*	476·63*
Groves (acres)	31·73	35·96	43·45	16·00
Plantations (acres)	3,186·59	1,288·19	2,280·20	714·05

*The figures given in this table in the last report were incorrect.

Under the head groves, the failures exceeded the successes, but the head is a small and comparatively unimportant one.

Avenues show a very marked improvement on the figures for the last period, since the failures amount to 12·6 per cent. of the length planted as against 26 per cent.

Plantations are not so satisfactory, the failures being 44 per cent. of the successes as against 31·3 per cent. The failures under this head are certainly partly due to the use of unsuitable species in bad soil, but this will no doubt be corrected as further experience is gained.

On the whole the period under report must be considered to have given satisfactory results, especially as the charge for establishment has decreased by Rs. 7,571. There is a strong tendency to replace the old establishment by properly trained men and it is probably to this that increase in the amount of work done is attributable.

27. A statement is appended showing the valuation of the standing timber. The statement is by no means complete as many officers find difficulty in making any estimate.

28. A statement is also appended showing the names of districts from which plans of operations have been received. The plans have been more or less acted up to in all cases.

29. The revenue from all sources was Rs. 14,47,812, the total expenditure was Rs. 22,58,770, and the deficit Rs. 8,10,958 as against Rs. 12,43,193, Rs. 20,45,610, and Rs. 8,02,417, respectively, for the period 1908-09 to 1910-11.

The deficit is made up as follows :—

					Rs.
District Boards	...	...	...	...	2,50,588
Canal Department	...	...	...	...	5,19,565
Provincial Divisions	...	...	...	...	40,805

Statement showing the Names of the Districts for which Plans of Arboricultural Operations have been drawn up.

Name of district.	Period for which the plan of arboricultural operations is sanctioned.	Result.
Hissar ...	1913—15 ...	Plan received, but returned for an estimate of cost. Not since received back.
Rohtak ...	1913-14 to 1915-16 ...	15 miles of roads proposed in 1913-14, against which 11·37 were planted up.
Gurgaon ...	1912-13 to 1914-15 ...	No new planting proposed and none carried out.
Delhi ...	...	No plan received since 1909-10.
Karnal ...	1910-11 to 1912-13 ...	Carried out as far as possible : 1913-14 to 1915-16 plan since received.
Ambala ...	1910-11 to 1912-13 ...	Fully worked up to 1913-14 to 1915-16. Plan since received.
Kangra ...	1910-11 to 1912-13 ...	Carried out as far as possible. Plan for 1913-14 to 1915-16 received.
Hoshiarpur ...	1911-12 to 1913-14 ...	13 out of 28 miles completed. Plan for 1914-15 to 1916-17 received.
Ferozepore ...	1912-13 to 1914-15 ...	Plan worked up.
Lahore ...	1912 to 1917 ...	Plan worked up to.
Gurdaspur ...	...	No plan received since 1909.
Sialkot ...	...	No plan received since 1911-12.
Gujrat ...	1909-10 to 1912-13 ...	84·77 miles of avenues were actually planted during triennium.
Jhelum ...	1909-10 to 1913-14 ...	Plan too indefinite for comparison.
Rawalpindi ...	1909-10 to 1913-14 ...	Plan too indefinite for comparison.
Shahpur ...	1909-10 to 1913-14 ...	Of 91½ miles provided for in the plan, 50½ miles were undertaken, 48 miles successfully planted.
Attock ...	1912-13 to 1914-15 ...	Fully worked up.
Lyallpur ...	...	No plan received since 1911.
Jhang ...	...	Ditto ditto.
Multan ...	...	Ditto ditto.
Muzaffargarh ...	1910-11 to 1912-13 ...	The plan provided for the planting of some 60,000 trees, of which only 20,000 were planted.
Montgomery ...	1909-10 to 1913-14 ...	The plan provided for some 32 miles in the triennium against which 8 miles were planted.
Jullundur ...	1912-13 to 1920-21 ...	8·25 miles of avenues were actually planted during the triennium.

Statement showing Valuation of Standing Timber in each District.

No.	Name of district.	Value.
		<i>Rs.</i>
1	Muzaffargarh	4,41,245
2	Mianwali	81,311
3	Jhang	38,000
4	Shahpur	9,78,445
5	Hissar	1,74,268
6	Hissar Municipality	36,495
7	Ferozepore	3,79,021
8	Rohtak	54,365
9	Lahore	2,11,280
10	Lahore Municipality	64,023
11	Karnal... ..	1,88,280
12	Dehli Province	15,000
13	Jullundur	3,23,397
14	Ludhiana	1,43,780
15	Gujrat... ..	12,88,900
16	Gujrat Municipality	27,200
17	Hoshiarpur	13,58,885
18	Gujranwalla	3,16,456
19	Amritsar	3,60,000
20	Amritsar Municipality	1,06,650
21	Multan	1,79,010
22	Montgomery	30,167
23	Simla	10,000
	Total ...	68,06,178

NOTE.—Information not received from 9 Districts.

B.

Statement showing Value of Timber and Firewood in each Division of the Canal Department.

No.	Name of division.	Value of stand- ing timber.	Value of firewood.
		Rs.	Rs.
1	Upper Bari Doab Canal, I Division ...	1,68,750	17,015
2	Ditto ditto II Division ...	5,73,319	90,843
3	Ditto ditto III Division ...	2,06,590	34,611
4	Ditto ditto IV Division ...	1,06,957	53,678
5	Upper Sutlej Division, Inundation Canals ...	10,505	63,145
6	Multan Canals Division ...	2,81,476	...
7	Dera Ghazi Khan Division, Indus Canals ...	2,52,568	...
8	Lower Sutlej Inundation Canals Division ...	31,134	...
9	Sirhind Canal, Ferozepur Division ...	...	1,66,105
10	Ditto Ludhiana Division ...	12,86,800	...
11	Ditto Patiala Division ...	3,05,951	...
12	Ditto Bhatinda Division ...	3,04,032	...
	Total ...	35,28,082	4,25,397

NOTE.—Information received from 12 Divisions only out of 40 Divisions.

C.

Provincial Divisions (Public Works Department).

No.	Name of division.	Value of stand- ing timber.
		Rs.
1	Lahore No. I ...	1,18,827
2	Lahore No. II ...	1,96,473
3	Lyallpur ...	71,900
4	Multan ...	77,968
5	Gurgaon ...	61,200
	Total ...	5,26,368

NOTE.—Information from 8 Divisions has not been received.

STATEMENTS.

STATEMENT No. I (a).

PROGRESS STATEMENT OF NURSERIES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3.					4					5	6
District or division.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
					ARID	DISTRICTS.							
Muzaffargarh ...	0.75	...	0.94	...	...	0.94	...	...	...	(n) 0.62	0.62	1.07	(a) Transferred to avenue.
Multan ...	1.14	...	0.74	...	...	0.74	...	...	...	(a) 1.08	1.08	0.80	
Dera Ghazi Khan ...	0.19	...	...	...	...	...	...	...	...	...	...	0.19	(b) For want of water.
Dera Ghazi Khan Municipality.	...	0.18	...	...	...	0.18	...	...	(f) 0.18	...	0.18	...	(c) To groves.
Mianwali ...	2.35	...	...	...	...	...	...	...	...	...	...	2.35	
Montgomery ...	0.12	...	1.14	...	...	1.14	...	(b) 0.24	...	(a) 0.24	0.24	1.02	(d) Transferred from color.
Jhang ...	1.25	...	2.39	...	...	2.39	...	...	(c) 1.50	(a) 0.25	1.75	1.89	
Jhang Municipality ...	0.01	...	...	...	...	...	...	...	(c) ...	...	...	0.01	(e) Transferred to Canal Department.
Lyallpur ...	4.52	...	...	...	...	...	...	...	(b) 4.52	...	4.52	...	
Shahpur ...	16.15	...	...	1,063.25	...	1,063.25	...	4.50	...	(e) ...	4.50	1,074.90	(f) Transferred to plantation.
Hissar ...	128.14	...	1.09	...	...	1.09	...	...	...	0.38	0.38	128.85	
Hissar Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	
Total arid districts ...	154.62	0.18	6.30	1,063.25	...	1,069.73	...	4.74	6.20	2.33	13.27	1,211.08	(g) Partly due to scarcity of water, partly by hail fall.
					VERY DRY DISTRICTS.								
Ferozepore ...	0.50	...	...	...	...	...	...	...	...	...	...	0.50	
Rohat ...	4.01	...	1.10	...	...	1.10	...	...	...	...	...	5.11	(h) Transferred to Gujranwala District.
Lahore ...	15.16	...	2.97	...	...	2.97	...	...	...	(h) 4.66	4.66	13.47	
Lahore Municipality ...	1.69	...	0.50	...	...	0.50	...	...	...	...	...	2.19	
Karnal ...	2.27	...	...	...	...	...	...	...	...	...	...	2.27	(i) Due to heavy rain.
Total very dry districts	23.63	...	4.57	...	...	4.57	...	...	...	4.66	4.66	23.54	
					DRY DISTRICTS.								(j) Due to drought and frost.
Jhelum ...	0.18	...	0.37	...	...	0.37	...	(g) 0.07	...	...	0.07	0.48	
Gujranwala ...	1.85	0.31	16.17	...	...	16.48	...	(i) 1.43	(f) 6.50	(a) 5.46	13.39	4.94	(k) Transferred partly to Rohat and partly to Gurgaon District.
Gurgaon ...	1.05	...	0.02	0.17	...	0.19	...	(j) ...	(c) ...	(a) ...	...	1.24	
Amritsar ...	16.50	...	5.79	...	...	5.79	...	1.12	17.90	0.51	19.53	5.76	
Amritsar Municipality...	7.34	...	...	...	...	...	...	...	...	(h) ...	...	7.34	(l) Destroyed by white ants.
Delhi Province ...	1.31	...	0.12	...	...	0.12	...	...	...	1.43	1.43	...	
Delhi Municipality ...	0.70	...	...	...	...	...	...	...	...	0.70	0.70	...	(m) Due to removal of bhishties for want of funds.
Juluudur ...	6.64	...	...	...	...	...	...	(l) ...	...	...	...	6.64	
Ludhiana ...	2.60	...	2.21	...	...	2.21	...	0.67	...	(b) ...	0.67	4.14	
Rawalpindi ...	4.02	...	0.98	...	...	0.98	...	(b) 0.46	(c) 1.22	(a) 1.15	2.83	2.15	(n) Transplanting.
Rawalpindi Municipality	2.00	...	0.10	...	...	0.10	...	(m) ...	(c) ...	(n) ...	...	2.10	
Attock ...	4.04	...	...	...	...	...	0.53	0.53	0.65	0.88	2.59	1.45	(o) Sold to private persons.
Attock Municipality ...	0.01	...	...	...	...	...	...	...	...	...	...	0.01	
Total dry districts ..	51.24	0.31	25.74	0.17	...	26.22	0.53	4.28	26.27	10.13	41.21	36.25	(p) Due to the removal of plants.
					FAIRLY MOIST OR FOREST DISTRICTS.								
Gujrat ...	11.09	...	2.78	...	...	2.78	...	(j) 2.98	(c) 5.30	(o) 0.87	9.15	4.72	
Gurdaspur ..	7.81	...	0.50	...	...	0.50	...	(b) ...	(c) ...	(n) ...	...	8.31	
Ambala ...	4.92	...	2.06	...	...	2.06	...	0.08	2.88	1.79	4.75	2.23	
Sialkot ...	8.28	...	15.85	...	...	15.85	...	...	...	...	...	24.13	
Sialkot Municipality ...	0.07	0.01	...	...	...	0.01	...	...	...	...	...	6.08	
Hoshiarpur ...	3.00	...	...	...	...	...	...	(b) 0.40	...	...	0.40	2.60	
Simla ...	3.27	...	...	...	...	...	...	...	...	...	...	3.27	
Kangra ...	10.23	...	0.77	...	...	0.77	...	...	...	(p) 0.41	0.41	10.59	
Total forest districts ..	48.67	0.01	21.96	...	...	21.97	...	3.46	8.18	3.07	14.71	55.93	
Total for 1911-12 to 1913-14.	278.16	0.50	53.57	1,063.42	...	1,122.49	0.53	12.8	40.65	20.19	73.85	1,326.80	
Total for 1908-09 to 1910-11.	265.23	...	62.74	...	0.70	63.44	...	7.59	30.87	12.05	50.51	278.16	

* The area of Delhi Municipality has been handed over to the notified area committee.

STATEMENT No. I (b):

PROGRESS STATEMENT OF NURSERIES IN THE CANAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1911-1912 TO 1913-1914.

1	2	3					4					5	6
District or Division.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	
Upper Bari Doab Canal, 1st Division.	1.00	...	...	...	...	...	...	...	(a) 1.00	...	1.00	...	(a) Transferred to plantation.
Upper Bari Doab Canal, 2d Division.	...	...	...	...	...	...	...	...	...	...	...	...	(b) Transferred to avenues.
Upper Bari Doab Canal, 3rd Division.	1.11	...	...	...	...	...	...	...	(a) 1.11	...	1.11	...	(c) 19.08 transferred to plantation. 1.12 transferred to avenues.
Upper Bari Doab Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	(d) Due to bad soil.
Upper Sutlej Division, Inundation Canals.	1.02	...	...	...	...	...	...	...	(a) 0.51	(b) 0.51	1.02	...	(e) Transplanted. (f) Eroded by river.
Central Workshop Division.	...	...	...	...	...	...	...	...	...	...	...	...	(g) 10.75 transferred to avenues and 0.84 to Planation.
Lower Bari Doab Canal, 2nd Division.	3.30	...	16.90	...	...	16.90	...	...	(e) 20.18	...	20.18	0.02	(h) Due to kallar soil.
Lower Bari Doab Canal, 3rd Division.	0.04	...	2.45	...	...	2.45	...	0.02	(a) 1.29	...	1.31	1.18	(i) Transferred to Rohitak Division.
Lower Bari Doab Canal, 4th Division.	...	...	...	...	...	...	...	...	...	...	...	...	(j) Scarcity of rain.
Multan Canals Division	12.00	...	2.64	...	0.04	2.68	...	(d) 0.02	(a) 7.51	(e) 0.20	7.73	6.95	(k) Owing to inability to irrigate the nursery.
Dera Ghazi Khan Division, Indus Canals.	20.75	...	3.65	...	...	3.65	...	(f) 8.09	(g) 10.73	(b) 0.26	19.14	5.46	(l) Bamboo trees withered owing to ground being unsuitable.
Muzaffargarh Canals Division.	0.19	...	2.26	...	...	2.26	0.48	...	1.84	...	2.32	0.13	(m) Transferred to 4th Division, Upper Chenab Canal.
Lower Sutlej Inundation Canals Division.	0.29	...	0.79	...	...	0.79	...	(h) 0.03	...	(e) 0.34	0.40	0.68	(n) Transferred to 3rd Division, Upper Jhelum Canal.
Western Jumna Canal, Karnal Division.	0.60	...	...	...	...	...	...	...	...	(i) 0.50	0.50	0.10	
Western Jumna Canal, Delhi Division.	...	...	1.00	...	...	1.00	...	...	(a) 0.50	...	0.50	0.50	
Western Jumna Canal, Hissar Division.	3.00	...	3.23	...	...	3.23	...	(j) 3.00	...	(i) 1.00	4.00	2.23	
Western Jumna Canal, Rohtak Division.	...	...	...	1.50	...	1.50	...	(f) 1.00	...	...	1.00	0.50	
Sirhind Canal, Ferozepur Division.	0.44	...	0.11	...	...	0.11	...	...	(a) 0.44	...	0.44	0.11	
Sirhind Canal, Ludhiana Division.	0.68	...	...	...	...	...	...	(k) 0.68	...	...	0.68	...	
Sirhind Canal, Patiala Division.	5.10	...	...	...	...	...	...	(l) 2.70	(a) 2.40	...	5.10	...	
Sirhind Canal, Bhatinda Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Carried over	49.52	...	33.23	1.50	0.04	34.77	0.48	15.57	47.57	2.81	66.43	17.83	

STATEMENT No. I. (b)—concluded.

PROGRESS STATEMENT OF NURSERIES IN THE CANAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1911-12 TO 1913-14.

1 District or Division.	2 Area under nurseries at the beginning of the triennial period.	3 ADDITIONS DURING THE PERIOD.					4 DEDUCTIONS DURING THE PERIOD.					5 Area remaining at end of the triennial period.	6 REMARKS.
		Correction of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantation or gardens.	Other causes.	Total deductions.		
		<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>		
Brought forward ...	49.52	...	33.23	1.50	0.04	34.77	0.48	15.57	47.57	2.81 (m)	66.43	17.86	
Upper Chenab Canal, 3rd Division.	0.01	...	0.30	...	...	0.30	...	...	...	0.01	0.01	0.30	
Upper Chenab Canal, 4th Division.	0.10	...	0.05	0.01	...	0.06	...	0.05	...	...	0.05	0.11	
Upper Chenab Canal, 5th Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Khanki Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Lyallpur Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Lower Gugera Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Upper Gugera Division.	9.90	...	...	...	...	...	9.90	...	...	...	9.90	...	
Lower Chenab Canal, Jhang Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Lower Chenab Canal, Burala Division.	3.00	...	1.00	...	...	1.00	...	...	(a) 4.00	...	4.00	...	
Upper Jhelum Canal, 1st Division.	0.23	...	...	...	0.30	0.30	...	...	(a) 0.30	(n) 0.23	0.53	...	
Upper Jhelum Canal, 2nd Division.	0.34	...	...	...	...	...	0.04	...	...	0.30	0.34	...	
Upper Jhelum Canal, 3rd Division.	...	...	...	0.23	...	0.23	...	...	...	...	...	0.23	
Upper Jhelum Canal, 4th Division.	...	...	2.00	...	...	2.00	...	...	...	...	...	2.00	
Upper Jhelum Canal, 5th Division.	...	...	0.12	...	...	0.12	...	...	(a) 0.08	...	0.08	0.04	
Lower Jhelum Canal, 1st Division.	1.25	...	...	...	...	...	...	...	...	...	...	1.25	
Lower Jhelum Canal, 2nd Division.	0.70	...	5.56	...	...	5.56	...	...	...	...	...	6.26	
Lower Jhelum Canal, 3rd Division.	9.81	...	...	...	...	...	...	...	(a) 9.11	(b) 0.70	9.81	...	
Shahpur Inundation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	
Total for 1911-12 to 1913-14.	74.86	...	42.26	1.74	0.34	44.34	10.42	15.62	61.06	4.05	91.15	28.05	
Total for 1908-09 to 1910-11.	41.70	0.21	58.01	1.11	...	59.33	0.40	2.56	17.22	5.99	26.17	74.86	

STATEMENT No. I (c).

PROGRESS STATEMENT OF NURSERIES IN THE PROVINCIAL DIVISIONS
FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3					4					5	6
District or Division.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Rawalpindi Division	3.66	...	2.61	...	(a) 0.15	2.76	...	(b) 0.87	...	(c) 1.90	2.77	3.65	(a) Transferred from Lyallpur Provincial Division.
Simla Division ...	...	...	...	...	...	...	...	...	...	...	...	...	(b) Eaten up by Military Camels Corps.
Kangra Division ...	2.23	...	0.22	...	...	0.22	...	(d) 0.07	...	...	0.07	2.38	(c) Transferred to roadside avenues.
Lahore Division, No. I.	18.18	...	1.00	...	...	1.00	...	(e) 0.69	(f) 16.26	(g) 1.47	18.42	0.76	(d) Due to rocky soil.
Lahore Division, No. II.	0.84	...	0.71	...	1.61	2.32	...	...	(f) 0.58	(h) 0.84	1.42	1.74	(e) Due to too much "shora" in the soil.
Jullundur Division	0.26	...	0.28	...	0.84	1.12	0.07	0.10	0.28	0.14	0.59	0.89	(f) To groves.
Lyallpur Division	1.53	...	0.06	...	...	0.06	...	...	(f) 0.32	(i) 0.15	0.47	1.12	(g) Transferred to Lahore, No. II.
Shahpur Division ...	...	...	...	...	...	...	...	...	...	...	...	...	(h) Transferred to Jullundur Provincial Division.
Multan Division ...	0.02	...	...	...	...	...	...	(j) 0.02	...	...	0.02	...	(i) Transferred to Lyallpur Provincial Division.
Ambala Division ...	1.96	...	2.30	...	...	2.30	0.02	...	(l) 2.14	...	2.16	2.10	(j) Flooded by river.
Delhi Provincial Division.	2.17	...	...	...	...	...	...	...	...	(k) 2.17	2.17	...	(k) 1.90 acres transferred to Gurgaon.
Delhi Province, 1st Circle.	...	...	...	...	0.27	0.27	...	...	...	...	...	0.27	0.27 acres transferred to Delhi No. I.
Delhi Province, 2nd Circle.	...	...	...	...	...	...	...	...	...	...	...	...	(l) Transferred to plantations.
Gurgaon Division ...	...	...	0.37	...	1.90	2.27	...	...	...	...	...	2.27	
Total for 1912-12 to 1913-14.	30.95	...	7.55	...	4.77	12.32	0.09	1.76	19.58	6.67	28.09	15.18	
Total for 1908-09 to 1910-11.	45.08	11.42	8.57	...	0.84	20.83	...	0.23	5.38	29.30	34.96	30.95	

STATEMENT NO. II (a).

PROGRESS STATEMENT OF PLANTATIONS IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4						5						6	7
DISTRICT OR DIVISION.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfer to other management.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
ARID DISTRICTS.																
Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Multan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dera Ghazi Khan ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D. G. Khan Municipality ...	...	...	...	...	(a)	...	...	0-18	...	...	...	...	...	...	...	0-18
Mianwali ...	138-49	138-49	203-00	...	...	...	...	203-00	...	...	...	...	...	...	...	341-49
Montgomery ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang Municipality ...	0-38	1-22	...	0-07	...	...	...	0-07	...	...	...	...	...	...	...	1-29
Lyallpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Shahpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hissar ...	138-48	83-23	...	...	...	...	...	...	...	...	...	...	...	...	...	93-23
Total Arid Districts ...	277-35	222-94	203-00	0-07	0-18	...	...	203-25	...	...	...	...	...	...	...	426-19
VERY DRY DISTRICTS.																
Ferozepore ...	423-00	305-00	...	15-00	...	...	...	15-00	...	(b) 7-50	...	...	...	...	7-50	312-50
Rohtak ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lahore Municipality ...	1-03	1-03	...	0-10	...	...	...	0-10	...	...	...	...	...	...	...	1-13
Karnal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Very Dry Districts ...	424-03	306-03	...	15-10	...	...	...	15-10	...	7-50	...	...	...	...	7-50	313-63
DRY DISTRICTS.																
Jhelum ...	...	...	...	...	(a)	...	...	...	...	...	...	...	...	...	...	...
Gujranwala ...	55-75	55-75	...	6-50	...	...	...	6-50	...	...	...	...	...	...	...	62-25
Gurgaon ...	2,302-72	44-31	...	...	...	...	...	...	...	...	...	...	...	...	...	44-81
Amritsar ...	...	1-47	...	...	...	...	...	...	...	...	...	...	...	...	...	1-47
Amritsar Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Delhi Province ...	69-21	29-41	1-25	9-05	...	...	...	10-30	...	(c) 8-65	...	(d) 12-00	...	20-65	...	19-06
Delhi Municipality* ...	...	938-73	...	...	...	...	...	...	...	...	...	938-73	...	938-73	...	...
Jullundur ...	80-62	80-62	...	...	...	...	...	...	...	...	...	...	...	...	...	80-62
Ludhiana ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rawalpindi Municipality ...	...	...	...	0-50	...	...	...	0-50	...	...	...	...	...	...	...	0-50
Attock ...	...	5-50	...	...	...	...	...	...	...	...	...	...	...	...	...	5-50
Attock Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total Dry Districts ...	2,508-30	1,156-29	1-25	9-55	6-50	...	...	17-30	...	8-65	...	950-73	...	950-38	...	214-21
FAIRLY MOIST OR FOREST DISTRICTS.																
Gujrat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gujrat Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gurdaspur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ambala ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sialkot ...	...	9-80	...	...	...	...	...	...	...	...	...	...	...	...	...	9-80
Sialkot Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hoshiarpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Simla ...	59-00	59-00	...	...	...	...	...	...	...	...	...	...	...	...	...	59-00
Kangra ...	57-78	57-78	...	...	...	...	...	...	...	...	...	...	...	...	...	57-78
Total Forest Districts ...	116-78	126-58	...	...	...	...	...	...	...	...	...	...	...	...	...	126-58
Total for 1911-12 to 1913-14.	3,326-46	1,811-84	204-25	24-72	6-68	...	...	235-65	...	16-15	...	950-73	...	966-88	1,080-61	
Total for 1908-09 to 1910-11.	5,946-21	1,879-84	...	39-75	8-46	6-25	...	54-46	63-00	1-96	...	20-00	37-50	122-46	1,911-84	

* The area of Delhi Municipality has been handed over to Notified Area Committee.

(a) Transferred from nurseries.

(b) Due to insufficient water and frost.

(c) Seed not germinated for want of rain.

(d) Transferred to Gurgaon District.

STATEMENT No. II (b).

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE
TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4						5						6	7
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Upper Bari Doab Canal, 1st Division.	1,295.24	2,407.07	...	21.80	498.00	...	...	509.80	...	...	...	(a) 1,590.83	...	1,599.83	1,316.94	
Upper Bari Doab Canal, 2nd Division.	1,728.29	2,216.29	...	...	...	...	...	...	...	...	...	(b) 488.00	...	488.00	1,728.29	
Upper Bari Doab Canal, 3rd Division.	1,480.69	1,471.14	...	75.42	0.01	...	...	75.43	93.05	...	...	...	...	93.05	1,453.52	
Upper Bari Doab Canal, 4th Division.	2,169.76	...	...	229.85	...	1,569.53	...	1,829.68	...	...	5.59	...	...	5.59	1,824.09	
Upper Sutlej Division, Inundation Canals.	328.46	328.46	...	2.01	(c) 0.51	...	...	2.51	...	(d) 0.78	...	...	(d) 6.28	7.14	323.83	
Central Workshop Division.	0.50	0.50	...	...	...	...	...	...	...	...	...	...	...	...	0.50	
Lower Bari Doab Canal, 2nd Division.	343.27	14.74	2.00	255.56	(c) 19.06	...	...	276.62	...	(e) 37.00	...	(f) 3.75	...	40.75	250.61	
Lower Bari Doab Canal, 3rd Division.	...	18.10	...	180.08	(c) 1.27	3.75	...	135.10	11.10	(e) 69.95	(g) 0.50	...	...	81.55	59.65	
Lower Bari Doab Canal, 4th Division.	6.00	...	...	6.00	...	...	...	6.00	...	...	...	...	...	...	6.00	
Multan Canal Division.	200.58	200.58	...	3.30	(e) 7.51	...	5.57	16.38	29.02	(i) 2.55	...	...	(j) 8.73	40.30	176.66	
Dera Ghazi Khan Division, Indus Canals.	10.07	5.07	...	12.30	(e) 1.80	(k) 5.20	...	20.00	...	...	...	...	...	...	25.07	
Muzaffargarh Canals Division.	20.52	20.52	0.01	4.47	2.50	...	...	6.99	4.25	(i) 0.05	(l) 2.06	(m) 0.10	...	6.40	21.04	
Lower Sutlej Division, Inundation Canals.	23.04	23.04	...	...	5.54	...	...	5.54	...	...	...	...	...	...	28.58	
Western Jumna Canal, Karnal Division.	1,124.62	859.61	...	...	...	...	...	...	...	1.20	...	(n) 141.29	...	142.49	717.12	
Western Jumna Canal, Delhi Division.	740.87	735.43	...	18.82	0.50	...	...	19.12	250.03	(o) 12.00	...	(p) 20.60	...	282.63	471.92	
Western Jumna Canal, Hissar Division.	699.93	777.07	...	43.95	...	...	...	43.95	...	(e) 41.03	...	(n) 4.05	...	45.08	775.94	
Western Jumna Canal, Rohtak Division.	169.14	...	...	...	...	145.34	...	145.34	...	...	...	...	...	...	145.34	
Sirhind Canal, Ferozepore Division.	3,255.68	2,345.96	...	3.50	3.40	...	...	6.90	30.21	...	...	...	...	30.21	2,322.65	
Sirhind Canal, Ludhiana Division.	4,052.91	3,318.24	...	12.30	...	...	...	12.00	...	...	...	...	(g) 34.00	34.00	3,286.24	
Sirhind Canal, Patiala Division.	3,925.85	2,759.78	...	2.40	...	...	...	2.40	...	...	...	...	...	...	2,762.13	
Sirhind Canal, Bhatinda Division.	2,097.00	1,391.42	...	19.03	...	...	...	19.03	...	...	...	...	...	...	1,304.45	
Upper Chenab Canal, 3rd Division.	138.10	266.41	1.76	319.22	19.00	...	11.00	350.99	...	(i) 186.23	(g) 2.50	(p) 39.60	27.90	252.23	385.16	
Carried over	23,997.51	19,057.38	3.77	1,143.30	549.10	1,754.82	16.57	3,467.56	417.66	349.79	10.65	2,294.22	478.99	3,149.31	19,375.63	

STATEMENT No. II (b)—concluded.

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4						5						6	7
Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Brought forward.	23,997.51	19,057.38	3.77	1,143.30	549.10	1,754.82	16.57	3,467.56	417.68	349.79	10.65	2,294.22	76.99	3,149.51	19,375.63	
Upper Chenab Canal, 4th Division.	71.62	24.54	...	159.08	...	51.40	...	210.48	16.55	(i) 140.60	...	14.80	...	171.95	63.07	
Upper Chenab Canal, 5th Division.	153.87	6.28	4.56	114.61	...	...	...	119.17	...	(i) 89.97	...	...	...	39.97	85.48	
Lower Chenab Canal, Khanki Division.	1,625.20	1,321.87	...	6.00	...	...	...	6.00	...	6.00	...	...	(s) 49.50	55.50	1,272.37	
Lower Chenab Canal, Lyallpur Division.	959.02	959.02	...	24.78	...	...	...	24.78	0.30	(s) 82.09	...	...	...	32.39	951.41	
Lower Chenab Canal, Lower Gugera Division.	632.47	570.54	...	185.74	...	...	...	185.74	0.01	9.20	...	...	121.80	181.01	625.27	
Lower Chenab Canal, Upper Gugera Division.	1,009.85	896.83	73.45	...	...	...	...	73.45	...	...	...	...	...	...	970.28	
Lower Chenab Canal, Jhang Division.	658.43	600.61	...	30.08	...	...	...	30.08	36.74	...	...	...	(v) 27.56	64.30	568.39	
Lower Chenab Canal, Burala Division.	781.53	327.02	0.50	389.00	4.00	...	...	393.50	...	...	...	...	(t) 48.00	48.00	673.12	
Upper Jhelum Canal, 1st Division.	6.52	6.52	...	128.12	0.30	35.84	...	164.26	...	114.04	...	(u) 55.84	...	170.78	...	
Upper Jhelum Canal, 2nd Division.	...	20.79	...	...	...	...	...	...	...	...	...	(1) 20.79	...	20.79	...	
Upper Jhelum Canal, 3rd Division.	1,395.11	185.59	56.64	351.80	...	276.68	...	685.12	8.70	(o) 235.58	...	37.49	...	281.86	588.65	
Upper Jhelum Canal, 4th Division.	388.08	137.23	...	136.10	...	...	...	136.10	...	(x) 110.94	...	(u) 158.60	...	269.54	3.79	
Upper Jhelum Canal, 5th Division.	1352.90	1.00	...	263.51	58.54	26.79	...	350.84	...	(x) 195.53	...	28.72	...	224.25	127.59	
Lower Jhelum Canal, 1st Division.	593.15	306.06	...	79.98	...	...	...	79.98	...	(y) 83.40	...	...	...	33.40	352.63	
Lower Jhelum Canal, 2nd Division.	282.96	258.12	...	24.84	...	...	...	24.84	...	...	...	...	...	...	282.96	
Lower Jhelum Canal, 3rd Division.	1,063.22	862.76	80.00	124.50	9.11	...	...	213.61	62.94	(s) 4.00	...	...	...	66.94	1,009.43	
Shahpur Inundation Canals Division.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total for 1911-12 to 1913-14.	33,972.55	25,542.75	218.92	3,161.44	621.05	2,147.63	16.57	6,165.51	542.99	1,272.04	10.65	2,610.46	323.85	4,759.99	26,948.27	
Total for 1908-09 to 1910-11.	31,089.41	24,254.36	220.73	2,240.45	13.53	108.44	...	2,563.15	221.62	712.09	116.22	63.83	181.00	1,204.76	25,543.76	

- (a) Transferred to 4th Division, Upper Bari Doab Canal.
 (b) Transferred to 1st Division.
 (c) From nurseries.
 (d) 3.36 due to dampness and came under river and the rest given back to Civil Department.
 (e) For want of water.
 (f) Transferred to 3rd Division, Lower Bari Doab Canal.
 (g) Transferred to avenues.
 (h) Erosion shown.
 (i) Late sowing and bad soil.
 (j) Uprooted.
 (k) New purchased.
 (l) To plantation.
 (m) Given up.
 (n) Transferred to Rohtak Division.

- (o) Died owing to failure of monsoon.
 (p) sold to Delhi Imperial Works.
 (q) Cut for fuel.
 (r) Transferred to 4th Division, Upper Chenab Canal.
 (s) Due to silting tank.
 (t) 18.30 acres sold.
 18.20 " blown by gale.
 11.00 " came under silting tank.
 50 " cut for experiment.
 (u) Transferred to 3rd Division, Upper Jhelum Canal.
 (v) 7.95 acres cut for silting tank and 19.61 acres to plantation.
 (x) Due to sandy soil and insufficient rainfall.
 (y) Scarcity of rain and of dry winds.
 (z) Portion sown broadcast in rains and uncommanded land failed.
 (1) Transferred to 1st and 3rd Divisions, Upper Jhelum Canal.

STATEMENT No. II (c).

PROGRESS STATEMENT OF PLANTATIONS IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4						5						6	7
District or Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves & or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of area as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Rawalpindi Division ...	2.25	2.25	...	...	...	...	...	...	...	...	...	...	...	...	2.25	
Simla Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lahore Division, No. I...	...	15.20	...	...	...	...	...	...	...	...	...	...	...	...	15.20	
Lahore Division, No. II	...	...	6.34	...	...	...	...	6.34	...	...	...	...	...	...	6.34	
Jullundur Division ...	0.20	0.12	...	...	...	...	...	...	...	...	...	...	...	...	0.12	
Lyallpur Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Shahpur Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Multan Division ...	...	7.27	...	...	...	...	...	...	...	...	...	...	...	...	7.27	
Ambala Division ...	...	1.45	...	0.43	2.14	...	...	2.57	...	...	...	...	...	...	4.02	
Dehli Division, 1st Circle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Dehli Division, 2nd Circle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gurgaon Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total for 1911-12 to 1913-14	2.45	26.29	6.34	0.43	2.14	...	...	8.91	...	...	...	...	...	...	35.20	
Total for 1908-09 to 1910-11	85.43	88.08	0.53	...	1.06	...	21.11	22.70	0.70	...	0.78	83.06	...	84.49	26.29	

STATEMENT No. III (a).

PROGRESS STATEMENT OF GROVES IN THE DISTRICT FOR THE TRIENNIAL PERIOD
1911-12 TO 1913-14.

1	2	3						4						5	6
District or Division.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
ARID DISTRICTS															
Muzaffargarh ...	292.64	...	14.76	...	...	0.37	15.13	...	8.75	...	...	20.93	20.71	278.06	
Multan ...	0.50	...	...	...	...	...	...	...	...	...	...	...	...	0.50	
Deri Ghazi Khan ...	...	...	...	...	...	...	...	...	(a)	...	...	...	...	...	
Mianwali ...	46.64	...	3.80	...	...	...	3.80	...	0.11	...	...	...	0.11	50.33	
Montgomery ...	746.00	...	...	...	...	...	...	...	...	...	...	...	...	746.00	
Jhang ...	27.63	...	...	1.50	...	...	1.50	...	...	...	...	7.38	7.38	21.75	
Jhang Municipality ...	10.98	...	...	...	0.86	...	0.86	...	...	...	...	...	...	11.84	
Chiniot Municipality ...	...	...	0.75	(b)	...	...	0.75	...	...	...	...	(c)	...	0.75	
Lyallpur ...	45.48	...	...	4.52	(d)	...	4.52	...	...	...	...	(a)	11.00	39.00	
Shahpur ...	1,227.55	...	...	...	112.50	...	112.50	...	...	...	...	39.50	39.50	1,100.55	
Hissar ...	321.74	...	...	...	...	...	...	...	...	...	...	...	...	321.74	
Hissar Municipality ...	8.42	...	...	...	...	...	...	...	...	...	...	...	...	8.42	
Total Arid Districts	2,527.58	...	19.31	6.02	113.36	0.37	139.06	...	8.86	...	39.50	39.34	87.70	2,578.94	
VERY DRY DISTRICTS.															
Ferozapore ...	393.54	...	...	...	...	...	...	...	...	...	...	...	...	393.54	
Rohtak ...	544.08	...	...	...	...	...	...	...	...	...	...	...	...	544.08	
Lahore ...	16.73	...	...	...	...	...	...	...	...	...	...	...	...	16.73	
Lahore Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Karnal ...	363.31	...	5.35	...	...	...	5.35	...	...	...	...	...	...	368.63	
Total Very Dry Districts	1,317.66	...	5.35	...	...	...	5.35	...	...	...	...	...	...	1,323.01	
DRY DISTRICTS.															
Jhelum ...	15.76	...	0.62	...	...	...	0.62	...	...	...	...	...	...	16.38	
Gujranwala ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gurgaon ...	232.66	...	...	...	...	...	...	...	...	...	...	...	...	232.66	
Amritsar ...	49.19	...	1.49	17.90	...	...	19.39	...	(f) 0.77	...	...	(e) 1.71	2.84	68.10	
Amritsar Municipality* ...	1.75	...	...	...	...	...	...	...	...	...	...	...	...	1.75	
Delhi Province ...	23.20	2.00	1.26	...	...	...	3.26	...	(g) 1.25	...	...	(h) 14.24	15.49	10.97	
Deihi Municipality ...	1.50	...	...	...	...	...	...	...	...	...	...	1.50*	1.50	...	
Jullundur ...	30.32	...	...	...	...	...	...	...	...	...	...	...	...	30.32	
Ludhiana ...	165.30	...	...	...	...	...	...	...	...	...	...	...	...	165.30	
Rawalpindi ...	162.12	...	1.22	...	...	...	1.22	...	(i) 23.38	...	...	...	23.38	139.96	
Rawalpindi Municipality ...	14.71	...	0.50	...	...	...	0.50	...	...	...	...	(j) 2.00	2.00	13.21	
Attock ...	31.65	...	0.65	...	...	...	0.65	12.04	(k) 1.19	...	...	...	13.23	19.07	
Attock Municipality ...	4.23	...	...	...	...	...	...	...	...	...	...	...	...	4.23	
Total Dry Districts	732.59	2.00	5.74	17.90	...	...	25.64	12.04	20.59	...	15.74	3.71	59.48	750.15	
FAIRLY MOIST OR FOREST DISTRICTS.															
Gujrat ...	135.40	...	0.33	5.30	...	...	5.63	...	(f) 0.51	...	(l) 2.20	0.02	2.73	138.39	
Gujrat Municipality ...	1.80	...	...	...	...	...	...	...	...	...	...	...	...	1.80	
Gurdaspur ...	15.76	...	...	...	...	...	...	...	...	...	...	...	...	15.76	
Ambala ...	32.45	2.75	...	1.79	...	...	4.54	...	...	...	...	...	...	37.02	
Sialkot ...	25.89	...	...	...	...	...	...	...	...	...	...	(n) 25.00	25.00	0.89	
Sialkot Municipality ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Hoshiarpur ...	17.34	...	...	...	6.13	...	6.13	...	...	...	...	...	...	23.47	
Simla ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra ...	20.50	...	...	...	(p) 1.67	...	1.67	...	...	...	...	(o) 8.12	8.12	14.05	
Total Forest Districts	249.26	2.75	0.33	7.09	6.13	1.67	17.97	...	0.51	...	2.20	33.14	35.85	231.38	
Total for 1911-12 to 1913-14	4,877.09	4.75	30.73	31.01	119.49	2.04	188.02	12.04	35.96	...	57.44	76.19	181.63	4,853.48	
Total for 1908-09 to 1910-11	4,823.31	2.00	43.45	22.15	46.59	8.45	122.64	...	10.14	2.17	24.31	32.24	68.86	4,877.09	

* The area of Delhi Municipality has been handed over to notified area committee.

(a) 20 mango trees died.

(b) Transferred from nurseries.

(c) Sold.

(d) Transferred from Colony.

(e) Converted into arable land.

(f) Due to frost and dryness.

(g) Destroyed by whiteants.

(h) Transferred to Gurgaon District.

(i) Blown down by wind.

(j) Trees were cut.

(k) Washed away by river.

(l) Transferred to Canal Department for

Upper Jhelum Canal.

(m) Old trees dried up.

(n) The area made over to zamindars, the owner of the land.

(o) Given on rent of certain district boards, gardens.

(p) Owing to the extension of garden at Dharamsala.

STATEMENT No. III (c).

PROGRESS STATEMENT OF GROVES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD. 1911-12 TO 1913-14.

1	2	3						4						5	6
District or Division.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Rawalpindi Division ...	823.85	...	1.00	...	...	(a) 77.97	78.97	...	...	...	...	...	...	402.82	
Simla Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division ...	0.85	...	...	...	...	...	...	...	...	...	...	...	...	0.85	
Lahore Division, No. I	1.81	...	...	16.26	...	...	16.26	...	...	...	...	...	...	18.07	
Lahore Division, No. II	20.52	...	...	0.58	...	(c) 0.07	0.65	...	...	...	...	(b) 20.52	20.52	0.65	
Jullundur Division ...	4.05	...	...	0.20	...	...	0.20	1.84	...	...	...	(d) 0.47	2.31	1.94	
Lyallpur Division ...	267.81	...	...	0.32	...	...	0.32	...	...	...	...	77.97	77.97	190.16	
Shahpur Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Multan Division ...	3.06	...	...	...	...	...	...	...	...	...	...	...	...	3.06	
Ambala Division ...	20.60	...	...	...	...	...	...	0.08	...	...	...	...	0.08	20.52	
Delhi Provincial Division	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Delhi Province, 1st Circle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Delhi Province, 2nd Circle	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gurgaon Division ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total 1911-12 to 1913-14	642.55	...	1.00	17.36	...	78.04	96.40	1.92	...	...	...	98.96	100.88	638.07	
Total 1908-09 to 1910-11	523.50	140.02	...	4.27	20.52	...	164.81	34.21	5.86	2.50	2.32	0.87	45.76	642.55	

(a) Transferred from Lyallpur Provincial Division.

(b) Transferred to Jullundur Provincial Division.

(c) Transferred from Jullundur Provincial Division.

(d) 0.40 acre, trees having fallen the area was cleared and 0.07 to Lahore II Division.

STATEMENT No. IV (a).

PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4					5					6	
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.		Total deductions.
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
ARID DISTRICTS.														
Muzaffargarh ...	855'85	19'40	...	85'59	...	...	85'59	...	11'18	10'45	...	...	21'61	204'38
Multan ...	1,062'68	238'29	...	93'10	...	(a) 0'09	93'19	15'30	(b) 9'74	3'58	0'20	0'35	29'17	362'31
Dera Ghazi Khan ...	182'00	110'64	...	4'50	...	...	4'50	...	(c) 2'40	...	...	...	2'40	112'74
Dera Ghazi Khan Municipality ...	17'00	...	...	6'50	...	...	6'50	...	...	0'50	...	...	0'50	8'00
Mianwali ...	49'37	46'55	...	0'37	...	...	0'37	...	...	...	...	...	...	46'02
Montgomery ...	229'00	128'00	...	8'00	...	...	8'00	...	...	...	...	...	...	186'00
Jhang ...	700'00	161'50	5'00	18'75	...	...	18'75	...	2'75	0'75	(f) 2'00	...	5'50	174'75
Jhang Municipality ...	19'88	16'49	...	...	2'39	...	2'39	...	...	...	...	...	...	18'88
Chiniot Municipality ...	1'85	...	...	0'94	...	...	0'94	...	...	...	...	...	...	0'94
Lyallpur ...	1,101'50	663'50	25'50	...	...	...	25'50	...	...	...	(d) 14'50	...	14'50	674'50
Shahpur ...	752'50	533'40	...	50'50	3'00	...	53'50	...	(e) 2'50	1'50	(f) 51'00	...	55'00	531'90
Shahpur Municipality ...	16'88	16'89	...	...	...	...	...	...	...	...	(g) 3'00	...	3'00	13'88
Hissar ...	393'81	140'09	...	6'30	...	...	6'30	...	...	...	...	...	...	146'39
Hissar Municipality ...	9'15	3'32	1'69	1'68	...	...	3'37	...	...	...	...	...	...	6'69
Total Arid Districts	4,643'97	2,309'06	32'19	233'23	5'39	0'09	280'90	15'30	28'55	16'78	70'70	0'35	131'68	2,438'28
VERY DRY DISTRICTS.														
Ferozepur ...	733'84	578'05	...	19'12	...	...	19'12	...	(h) 7'89	...	...	...	7'89	589'28
Rohtak ...	473'08	220'95	...	11'37	...	...	11'37	...	(e) 2'25	...	...	...	2'25	230'07
Lahore ...	363'79	356'19	...	12'75	...	...	12'75	...	...	...	(i) 19'50	...	19'50	340'44
Lahore Municipality ...	105'31	71'43	13'06	16'00	...	...	29'06	...	2'50	...	...	...	2'50	97'09
Karnal ...	677'89	160'09	...	...	...	...	...	...	...	...	...	...	...	160'09
Karnal Municipality ...	7'95	7'95	...	...	...	...	...	...	...	...	...	...	...	7'95
Total Very Dry Districts	2,351'86	1,394'66	13'06	59'24	...	...	72'30	...	12'64	...	19'50	...	32'14	1,434'62

(a) Spontaneous growth.

(b) Destroyed by white ants.

(c) Due to flood and damage by cattle.

(d) Six miles transferred to Toba Tek Singh Municipal Committee and the rest abandoned.

(e) For want of water.

(f) Transferred to Gujrat District.

(g) Transferred to District Board, Shahpur.

(h) Due to water and frost, &c.

(i) Transferred to Gujranwala District.

(j) Transferred to Jhang Municipality.

STATEMENT No. IV (a)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4					5					6	7	
District or division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees, at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.	
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.			Total deductions.
DRY DISTRICTS.															
Melum ...	358'89	308'36	...	14'18	...	...	14'18	0'03	(e) 4'86	...	...	...	4'69	317'65	
Do. Municipality ...	16'52	28'89	...	7'28	...	...	7'28	...	(j) 4'14	...	...	...	4'14	32'03	
Gujranwala ...	643'38	325'66	...	34'12	...	...	34'12	...	(k) 2'50	...	...	...	2'50	367'28	
Gurgaon ...	467'77	230'13	...	...	(l) 33'37	...	33'37	...	...	...	...	...	...	263'50	
Amritsar ...	289'35	223'57	...	25'75	(m) 17'74	...	43'49	...	(h) 23'50	10'85	...	...	34'35	232'71	
Amritsar Municipality ...	68'00	58'09	...	...	...	...	...	...	...	...	...	...	...	58'09	
Delhi Province ...	347'33	146'58	...	77'10	...	...	77'10	1'50	(n) 66'50	4'62	(o) 113'45	...	166'07	37'61	
Delhi Municipality ...	...	26'28	...	...	...	...	...	...	...	...	26'28*	...	26'28	...	
Jullundur ...	283'35	242'43	...	6'25	...	...	6'25	...	...	...	...	...	...	250'68	
Ludhiana ...	291'81	234'56	...	3'00	...	...	3'00	...	(b) 9'25	...	...	...	0'25	237'81	
Rawalpindi ...	800'47	352'00	...	89'00	...	...	80'00	...	(p) 24'00	5'00	...	...	29'00	412'00	
Rawalpindi Municipality ...	18'00	10'00	...	2'00	...	...	2'00	...	...	...	...	...	...	12'00	
Attock ...	849'00	127'10	...	11'50	...	...	11'50	...	...	...	...	...	...	138'60	
Attock Municipality ...	4'53	4'53	...	...	...	...	...	...	...	...	...	...	...	4'53	
Total Dry Districts ...	4,436'40	2,318'18	...	272'19	61'11	...	328'20	1'53	125'75	20'47	139'73	...	287'48	2,353'99	
FAIRLY MOIST OR FOREST DISTRICTS.															
Gujrat ...	678'34	594'00	...	83'61	...	...	83'61	...	(h) 29'60	12'40	1'20	(g) 11'34	54'54	613'07	
Gujrat Municipality ...	12'33	10'82	...	1'16	...	...	1'16	3'64	(h) 0'29	0'30	...	...	4'73	7'25	
Gurdaspur ...	643'85	501'61	48'39	24'50	...	...	72'89	...	(e) 4'50	...	...	...	4'50	570'00	
Ambala ...	314'77	187'32	10'99	50'73	...	...	61'71	7'25	(w) 6'59	3'28	...	...	17'12	231'91	
Sialkot ...	841'51	643'17	...	100'00	...	...	100'00	144'70	...	...	(s) 1'30	...	146'30	596'97	
Sialkot Municipality ...	10'80	5'75	1'40	0'80	1'60	...	3'80	...	...	...	...	...	...	9'55	
Isbharpur ...	576'16	516'00	...	16'00	...	...	16'00	...	(t) 3'00	...	...	...	3'00	529'00	
Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Muzaffargarh Municipality ...	543'43	543'43	...	53'62	...	...	53'62	...	...	13'75	...	...	13'75	563'30	
Total Forest Districts ...	3,619'19	2,962'10	60'77	330'42	1'60	...	392'79	155'59	43'98	30'23	2'80	11'34	243'94	3,140'95	
Total for 1911-12 to 1913-14	15,251'42	9,014'00	106'02	985'07	69'10	0'09	1,040'28	172'42	210'92	67'43	232'73	11'69	695'24	9,368'04	
Total for 1908-09 to 1910-11	14,945'30	8,302'29	19'35	958'98	150'75	1'44	1,130'52	17'49	246'29	87'88	19'33	48'02	418'81	9,014'00	

- (j) Died owing to hot weather.
 (k) Died in Kallar soil.
 (l) Transferred from Delhi District.
 (m) Transferred from nurseries.
 (n) Seed not germinated due to want of rains.
 (o) Transferred to Gurgaon and Rohtak district.

- (p) Scarcity of rains.
 (q) Dry and old trees were sold.
 (r) Due to late planting and neglect of staff.
 (s) Transferred to Sialkot Municipality.
 (t) The young plants were destroyed by the owners of the adjoining fields, as the shadows of the trees damage their crops.

* Transferred to Notified Area Committee, Delhi.

STATEMENT NO. IV (b).

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4					5					6	
District or division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.	
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
Upper Bari Doab Canal, 1st Division.	55.00	182.90	...	6.10	43.80	...	49.90	32.60	...	2.30	(a) 152.90	...	187.80	45.00
Upper Bari Doab Canal, 2nd Division.	57.00	100.80	...	...	...	...	...	...	...	...	(b) 43.80	...	43.80	57.00
Upper Bari Doab Canal, 3rd Division.	157.00	116.20	...	14.00	...	...	14.00	...	4.00	...	...	...	4.00	126.20
Upper Bari Doab Canal, 4th Division.	158.00	...	...	...	152.90	...	152.90	...	...	...	...	...	...	152.90
Upper Sutlej Division, Inundation Canals.	513.98	379.36	...	2.11	0.51	...	2.62	1.01	...	...	...	0.85	1.86	380.12
Central Workshop Division.	0.14	0.14	...	...	...	...	...	...	...	...	...	...	...	0.14
Lower Bari Doab Canal, 2nd Division.	139.28	4.00	...	77.36	2.50	...	79.86	...	4.60	...	...	...	4.60	79.26
Lower Bari Doab Canal, 3rd Division.	81.60	0.58	1.16	32.26	0.80	...	34.22	(d) 0.80	(e) 16.84	...	...	...	17.64	17.16
Lower Bari Doab Canal, 4th Division.	...	...	...	...	...	...	...	(d) ...	(e) ...	...	...	...	...	...
Multan Canals Division ...	485.49	348.51	0.30	21.70	...	...	22.00	53.79	1.00	...	...	...	54.79	315.72
Dera Ghazi Khan Division, Indus Canals.	655.73	292.14	131.60	69.10	5.64	...	196.34	56.43	14.21	0.50	...	...	71.14	417.34
Muzaffargarh Canals Division.	758.36	239.81	63.06	82.79	19.00	...	164.55	62.69	0.05	37.77	...	...	100.49	304.17
Lower Sutlej Inundation Canals Division.	560.40	249.40	...	2.40	7.10	0.50	10.00	...	...	...	27.24	...	27.24	232.16
Western Jumna Canal, Karnal Division.	252.00	132.85	...	...	...	...	...	...	...	...	78.30	...	78.30	54.55
Western Jumna Canal, Delhi Division.	381.24	284.63	2.77	6.20	...	...	8.97	...	1.43	...	78.50	5.10	80.03	213.57
Western Jumna Canal, Hissar Division.	222.90	140.90	...	5.60	...	...	5.60	...	2.40	...	18.00	...	20.40	126.10
Western Jumna Canal, Rohtak Division.	262.10	...	...	...	168.40	...	168.40	...	...	...	...	...	...	168.40
Sirhind Canal, Ferozepur Division.	361.20	115.22	...	8.00	...	...	8.00	...	...	...	...	...	...	123.22
Sirhind Canal, Ludhiana Division.	247.72	197.79	...	...	...	...	...	...	...	...	...	...	...	197.79
Sirhind Canal, Patiala Division.	221.74	172.24	...	...	...	...	...	...	...	...	...	...	...	172.24
Sirhind Canal, Bhatinda Division.	126.80	57.89	...	1.50	...	...	1.50	...	...	...	...	...	...	59.39
Upper Chenab Canal, 3rd Division.	123.00	14.89	...	85.47	1.00	...	86.47	...	(i) 25.95	...	(k) 1.00	(j) 1.00	27.98	73.38
Upper Chenab Canal, 4th Division.	36.20	...	...	6.69	1.00	...	7.69	...	(e) 6.69	...	...	...	6.69	1.00
Upper Chenab Canal, 5th Division.	70.80	...	...	71.48	...	...	71.48	...	(i) 47.84	...	...	...	47.84	23.64
Carried over	5,923.66	3,030.25	188.39	492.76	402.65	0.50	1,084.80	207.32	125.04	40.55	394.74	6.95	774.60	3,340.45

- (a) Transferred to 4th Division.
 (b) Transferred to 1st Division.
 (c) For want of water.
 (d) Wrongly shown last year.
 (e) Due to bad soil.
 (f) Eroded by river and kallar soil.

- (g) From nurseries.
 (h) Transferred to Rohtak Division.
 (i) Owing to hard ground the seeds did not germinate.
 (j) Dried up on meeting sand.
 (k) Transferred to 4th Division.
 (r) Transferred to Rohtak Division 72.10, and to Delhi Imperial Works 1.40.

STATEMENT No. IV (b)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14—concluded.

1	2	3	4					5						6	7
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	
Brought forward ...	5,923.66	3,030.25	188.89	492.76	402.65	0.50	1,084.60	207.32	125.04	40.55	394.74	6.95	774.60	3,340.45	
Lower Chenab Canal, Khanki Division.	220.04	140.10	...	14.00	...	...	14.00	...	(r) 5.50	...	...	...	5.50	148.60	
Lower Chenab Canal, Lyallpur Division	380.52	285.80	...	17.20	...	14.20	3.40	...	...	...	...	...	...	317.20	
Lower Chenab Canal, Lower Gugera Division.	636.50	278.31	...	118.58	...	...	118.58	6.49	(l) 3.40	...	...	...	10.19	386.68	
Lower Chenab Canal, Upper Gugera Division.	587.49	386.22	26.29	4.40	...	...	30.69	...	(m) 6.00	...	...	...	6.00	410.91	
Lower Chenab Canal, Jhang Division.	452.94	237.29	5.12	3.48	...	...	36.60	9.61	...	2.00	...	(q) 2.13	13.74	260.15	
Lower Chenab Canal, Burala, Division.	493.61	297.54	...	50.20	...	...	50.20	20.58	(e) 12.00	...	...	...	32.58	315.16	
Upper Jhelum Canal, 1st Division.	5.10	0.75	...	1.00	1.2	...	2.25	...	(c) 0.50	...	(n) 2.00	...	2.50	0.50	
Upper Jhelum Canal, 2nd Division.	...	0.50	...	...	...	...	...	...	...	...	(s) 0.50	...	0.50	...	
Upper Jhelum Canal, 3rd Division.	32.60	...	...	1.50	2.00	...	3.50	...	1.50	...	...	...	1.50	2.00	
Upper Jhelum Canal, 4th Division.	25.00	1.00	...	15.20	...	...	15.20	1.00	(o) 11.20	2.40	...	...	14.60	1.60	
Upper Jhelum Canal, 5th Division.	41.16	1.30	...	3.10	...	...	3.10	...	1.00	0.30	...	...	1.30	3.10	
Lower Jhelum Canal, 1st Division.	269.24	118.10	...	6.70	...	...	6.70	...	...	...	...	...	...	119.80	
Lower Jhelum Canal, 2nd Division.	710.20	244.10	17.55	135.20	...	...	152.75	13.30	(p) 15.75	...	...	...	29.05	367.80	
Lower Jhelum Canal, 3rd Division.	580.00	265.00	15.20	256.80	...	...	272.00	29.90	(e) 14.30	...	...	...	44.20	492.80	
Shahpur Inundation Canals, Division.	237.49	31.96	...	35.90	...	...	35.90	...	...	...	...	...	...	67.86	
Total for 1911-12 to 1913-14.	10,595.60	5,313.22	253.05	1,184.00	405.90	14.70	1,857.65	288.50	196.19	45.25	397.24	9.08	936.28	6,234.61	
Total for 1908-09 to 1910-11.	9,101.88	5,007.24	234.18	789.80	33.20	10.40	1,067.58	421.72	219.82	35.49	26.20	58.37	761.60	5,313.22	

(l) Due to bad soil and intense cold.

(n) Due to silting tank.

(s) Transferred to 1st Division, Upper Jhelum Canal.

(r) Due to late sowing, late rainfall and poor soil.

(e) Insufficient rainfall.

(p) Due to depredation by cattle and bad soil.

(g) Sold by public auction.

STATEMENT No. IV (c).

PROGRESS STATEMENT OF AVENUES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4						5						6
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.
			Corrections or lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
														Miles and decimals.	
Rawalpindi Division	111.72	70.00	76	8.78	...	(a) 35.05	51.59	13.55	(b) 1.70	2.05	...	...	17.30	104.29	
Simla Division	...	...	..	...	...	...	...	...	...	...	...	...	...	...	
Kangra Division	84.50	155.09	3.71	48.89	...	...	52.54	...	7.63	...	...	...	7.63	200.00	
Lahore No. I	77.22	35.94	...	5.65	...	...	5.65	...	...	...	..	(c) 8.35	8.35	33.24	
Lahore No. II	64.12	71.43	...	13.26	...	(c) 39.72	52.98	61.69	...	...	...	(d) 9.74	71.43	52.98	
Jullundur Division	126.99	101.56	...	8.88	...	0.74	18.62	...	1.01	0.62	...	31.37	33.00	87.18	
Lyallpur Division	79.84	67.81	...	4.25	...	...	4.25	...	..	...	...	(f) 35.05	35.05	37.01	
Shahpur Division	...	...	...	..	...	...	...	...	...	..	...	...	...	...	
Multan Division	34.02	49.40	...	...	...	...	...	...	...	..	(g) 15.57	0.88	16.45	32.95	
Ambala Division	220.59	129.16	...	39.26	...	...	39.26	...	(i) 4.02	3.25	...	...	7.27	161.15	
Delhi Province	...	72.27	0.38	1.25	...	...	1.63	...	...	...	...	(h) 73.90	73.90	...	
Delhi I Circle	44.50	...	...	...	...	24.75	24.75	...	...	...	...	...	...	24.75	
Delhi II Circle	28.00	...	...	...	...	17.00	17.00	...	...	...	...	...	...	17.00	
Gurgaon Division	73.77	...	...	1.75	23.25	32.15	57.15	7.40	...	...	...	...	7.40	49.75	
Total 1911-12 to 1913-14	945.27	752.66	11.85	131.91	23.25	158.41	325.43	82.64	14.36	5.92	15.57	159.29	277.78	800.30	
Total 1908-09 to 1910-11	920.32	1,046.64	5.92	80.80	41.84	3.04	131.60	359.11	10.52	6.41	47.21	2.33	425.58	752.66	

(a) Transferred from Lyallpur Provincial Division.

(b) Destroyed by white ants.

(c) Transferred to Lahore Provincial II Division.

(d) Transferred to Jullundur Provincial Division.

(e) 31.37 transferred from Jullundur Division and 8.35 transferred from Lahore Division, No. I.

(f) Transferred to Rawalpindi Provincial Division.

(g) Transferred to Montgomery District Board.

(h) 32.15 transferred to Gurgaon Division.

(i) 24.75 transferred to Delhi I.

17.00 transferred to Delhi II.

(j) Due to frost during winter.

STATEMENT No. V (a).

INCOME FROM ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4	5	6	7	8
District or Division.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Muzaffargarh	5,554	...	...	25,755	...	31,309	
Multan	9,896	...	...	4,942	...	14,838	
Dera Ghazi Khan	...	...	...	4,742	...	4,742	
Mianwali	4,966	...	2,780	1,081	...	8,777	
Montgomery	1,164	...	...	2,883	...	4,047	
Jhang	2,091	...	...	2,942	...	5,033	
Jhang Municipality	218	...	...	3,249	844	4,311	
Chiniot Do.	63	...	...	132	...	195	
Lyallpur	...	...	...	5,958	...	5,958	
Shahpur	8,567	...	...	59,268	12,280	80,115	
Shahpur Municipality	2,080	...	...	1,012	...	3,092	
Hissar	4,580	...	...	1,293	526	6,398	
Hissar Municipality	232	...	...	290	...	522	
Ferozepore	4,489	...	10,866	59,347	...	74,702	
Rohtak	5,182	14	...	10,141	...	15,337	
Lahore	100	...	...	11,391	...	11,491	
Lahore Municipality	23,192	...	...	9,000	1,369	33,561	
Karnal	2,494	...	...	5,366	432	8,292	
Jhelum	8,225	...	...	15,498	...	23,723	
Gujranwala	7,814	...	...	12,506	...	20,320	
Gujranwala Municipality	1,138	...	...	330	...	1,468	
Gurgaon	551	1,293	347	15,169	...	17,360	
Amritsar	1,563	...	...	22,469	...	24,032	
Amritsar Municipality	9,966	...	...	7,056	18,833	35,855	
Delhi Province	...	...	2,077	7,165	7,720	16,962	
Jullundur	2,590	1,165	2,345	42,742	1,286	50,128	
Ludhiana	5,264	...	...	24,469	...	29,733	
Rawalpindi	2,951	...	...	9,167	...	12,118	
Rawalpindi Municipality	3,465	...	...	3,401	66,842	73,708	
Attock	761	...	...	3,107	227	4,095	
Attock Municipality	440	...	...	127	...	567	
Gujrat	1,338	...	...	43,098	...	44,436	
Gujrat Municipality	628	...	...	1,248	3	1,879	
Gurdaspur	1,709	...	21,677	...	7,222	30,608	
Ambala	1,099	...	...	18,738	...	19,837	
Sialkot	8,603	1,830	...	97,387	1,194	1,09,014	
Sialkot Municipality	290	...	...	912	...	1,202	
Hoshiarpur	3,826	...	...	90,920	...	94,746	
Simla	...	782	7,275	...	1,260	9,317	
Kangra	1,265	...	...	6,325	...	7,590	
Total for 1911-12 to 1913-14	1,38,354	5,084	47,367	6,30,575	1,20,038	9,41,418	
Total for 1908-09 to 1910-11	1,42,860	9,221	33,413	4,67,700	1,16,094	7,69,288	

STATEMENT No. V (b).

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4	5	6	7	8
Division,	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS,
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, 1st Division	654	...	14,075	5,827	8,659	29,215	
Upper Bari Doab Canal, 2nd Division	180	...	8,580	...	4,401	13,111	
Upper Bari Doab Canal, 3rd Division	50	...	11,843	...	5,234	18,627	
Upper Bari Doab Canal, 4th Division	350	...	7,500	...	1,207	9,057	
Upper Sutlej Division, Inundation Canals.	...	...	8,426	1,107	3,742	13,275	
Central Workshop Division ...	...	...	...	...	...	...	
Lower Bari Doab Canal, 2nd Division	...	...	...	...	...	...	
Lower Bari Doab Canal, 3rd Division	...	...	...	...	...	...	
Lower Bari Doab Canal, 4th Division	...	...	...	...	...	...	
Multan Canals Division ...	58	...	8,042	237	2,909	11,246	
Dera Ghazi Khan Division, Indus Canals.	411	...	5,305	6,668	483	12,867	
Muzaffargarh Canals Division ...	1,901	...	25,932	25,815	1,749	55,397	
Lower Sutlej Inundation Canal Divisions.	108	...	1,692	708	562	3,070	
Western Jumna Canal, Karnal Division.	130	...	11,274	...	8	11,412	
Western Jumna Canal, Delhi Division	8,660	...	11,754	...	4,905	25,319	
Western Jumna Canal, Hissar Division	722	...	30,646	299	4,488	36,155	
Western Jumna Canal, Rohtak Division	...	...	1,390	...	...	1,390	
Sirhind Canal, Ferozepore Division ...	...	...	24,751	...	...	24,751	
Sirhind Canal, Ludhiana Division ...	248	...	35,334	...	8,064	43,646	
Sirhind Canal, Patiala Division ...	417	...	1,779	632	27,401	30,229	
Sirhind Canal, Bhatinda Division ...	14	...	2,359	...	8,988	11,361	
Upper Chenab Canal, 3rd Division ...	...	...	...	...	...	...	
Upper Chenab Canal, 4th Division ...	...	...	18	...	...	18	
Upper Chenab Canal, 5th Division ...	...	...	...	...	...	...	
Lower Chenab Canal, Khanki Division	100	...	6,160	...	...	6,260	
Lower Chenab Canal, Lyallpur Division.	...	...	8,865	1,255	16,892	27,012	
Lower Chenab Canal, Lower Gugera Division.	...	...	1,800	...	6,846	8,646	
Lower Chenab Canal, Upper Gugera Division.	1,260	...	4,000	3,176	...	8,436	
Lower Chenab Canal, Jhang Division	...	...	5,834	825	180	6,839	
Carried over ...	15,213	...	2,36,359	46,549	1,06,718	4,05,339	

STATEMENT No. V (b)—concluded.

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1911-12 TO 1913-14—concluded.

1	2	3	4	5	6	7	8
Division.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Bs.	Rs.	Rs.	
Brought forward ...	15,213	...	2,86,859	46,549	1,06,718	4,05,339	
Lower Chenab Canal, Burala Division ...	...	...	4,383	...	...	4,383	
Upper Jhelum Canal, 1st Division ...	...	...	...	...	...	...	
Upper Jhelum Canal, 2nd Division ...	...	...	...	...	...	...	
Upper Jhelum Canal, 3rd Division ...	20	...	536	...	...	556	
Upper Jhelum Canal, 4th Division ...	...	...	...	...	...	...	
Upper Jhelum Canal, 5th Division ...	...	...	...	...	...	...	
Lower Jhelum Canal, 1st Division ...	719	...	975	...	2,925	4,619	
Lower Jhelum Canal, 2nd Division ...	581	...	401	...	1,066	2,048	
Lower Jhelum Canal, 3rd Division ...	47	...	914	53	2,620	3,634	
Shahpur Inundation Canals Division...	...	..	743	9	72	824	
Total for 1911-12 to 1913-14 ...	16,580	...	2,44,811	46,611	1,13,401	4,21,403	
Total for 1908-09 to 1910-11 ...	12,277	70	2,58,188	18,760	92,452	3,81,747	

STATEMENT No. V (c).

INCOME FROM ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4	5	6	7	8
DIVISION.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rawalpindi Division ...	321	12	780	915	12,853	14,881	
Kangra Division ...	...	...	...	500	1,543	2,043	
Lahore Division, No. I ...	...	...	...	3,205	...	3,205	
Lahore Division, No. II ...	...	...	...	8,038	1,500	9,538	
Jullundur Division ...	...	80	...	17,389	6,205	23,624	
Lyallpur Division ...	150	...	...	4,000	443	4,593	
Multan Division ...	...	...	...	4,974	...	4,974	
Ambala Division ...	...	...	...	13,625	481	14,106	
Delhi Division, I Circle ...	...	...	...	1,141	150	1,291	
Delhi Division, II Circle ...	...	...	...	...	...	...	
Gurgaon Division ...	...	...	...	5,738	1,048	6,786	
Total 1911-12 to 1913-14 ...	471	42	730	59,525	24,223	84,991	
Total 1908-09 to 1910-11 ...	538	...	661	64,961	25,998	92,158	

STATEMENT No. VI (a).

EXPENDITURE ON ARBORICULTURE IN THE DISTRICT DURING THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4	5	6	7	8	9	10	11	12
District or Division.	WORKS.								ESTABLISHMENT.		REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.	Total.	
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
Muzaffargarh ...	20,673	756	...	...	...	...	16,826	630	5,856	44,741	
Multan ...	24,255	...	...	...	...	...	6,047	...	18,019	48,321	
Dera Ghazi Khan ...	...	...	...	...	...	...	...	...	3,120	3,120	
Dera Ghazi Khan Municipality	...	...	...	...	...	...	...	500	3,730	4,230	
Mianwali ...	16,438	531	...	...	2,304	...	12,348	1,074	2,178	34,873	
Montgomery ...	7,003	...	100	...	...	...	8,636	720	3,172	19,681	
Jhang ...	12,663	...	...	...	...	...	5,618	2,719	14,103	35,103	
Jhang Municipality	2,425	...	...	...	...	...	4,167	...	...	6,592	
Chenot Municipality	...	...	...	...	...	...	272	...	287	559	
Lyallpur ...	...	...	...	...	...	...	37,948	...	12,069	50,017	
Shahpur ...	15,108	...	...	...	...	...	52,900	...	7,650	75,658	
Shahpur Municipality	...	4,340	...	...	...	...	826	...	...	5,166	
Hissar ...	8,840	...	1,541	...	...	...	21,887	...	...	32,268	
Hissar Municipality	4,153	...	...	...	45	9	112	...	3,447	7,771	
Ferozepore ...	20,133	...	...	...	6,889	602	16,346	10,978	4,815	60,063	
Rohtak ...	14,200	...	1,356	864	...	...	24,289	...	5,292	46,001	
Lahore ...	157	...	...	...	...	...	16,201	377	600	17,305	
Lahore Municipality	84,215	200	...	...	1,673	...	38,211	158	263	1,24,720	
Karnal ...	4,768	...	840	...	...	...	6,942	...	3,257	15,807	
Jhelum ...	11,915	...	...	...	...	...	2,693	...	12,383	26,991	
Gujranwala ...	18,484	...	995	...	...	...	22,233	...	8,023	49,735	
Gujranwala Municipality	1,740	...	...	...	...	...	936	...	...	2,676	
Gurgaon ...	6,169	...	1,754	...	571	...	24,094	...	3,382	35,970	
Amritsar ...	3,905	...	...	...	...	...	18,886	...	3,464	26,255	
Amritsar Municipality	17,144	816	...	...	...	...	4,000	...	29,203	51,163	
Delhi Province ...	...	...	649	15	1,963	...	11,626	215	1,493	15,961	
Jullundur ...	8,789	...	2,909	...	1,260	...	14,295	...	6,584	33,837	
Ludhiana ...	10,907	2,204	1,512	546	...	...	19,599	...	120	34,888	
Rawalpindi ...	1,153	...	...	...	...	...	9,084	...	...	10,242	
Rawalpindi Municipality	7,958	...	...	...	...	...	576	...	3,249	11,783	
Attock ...	3,215	...	...	225	...	...	3,623	2,442	928	10,433	
Attock Municipality	1,782	...	...	...	...	...	469	...	...	2,281	
Gujrat ...	7,821	...	1,660	...	...	...	32,250	...	4,212	45,943	
Gujrat Municipality	1,530	...	...	...	...	513	19	...	462	2,524	
Gurdaspur ...	...	9,655	...	...	2,423	...	...	...	28,407	40,485	
Ambala ...	4,407	...	200	1,200	...	...	9,438	10,000	448	25,693	
Sialkot ...	18,682	...	1,561	...	...	...	27,202	14,765	14,645	76,805	
Sialkot Municipality	2,495	...	...	...	...	...	...	...	1,453	(a) 3,948	
Hoshiarpur ...	7,902	...	...	...	...	...	25,529	...	...	33,431	
Simla ...	...	...	112	...	123	...	...	...	4,956	5,191	
Kangra ...	3,197	140	...	...	...	...	10,298	...	...	13,635	
Total for 1911-12 to 1913-14	3,74,236	18,642	15,189	2,350	17,251	1,124	5,06,806	44,578	2,11,330	11,92,006	
Total for 1908-09 to 1910-11	3,41,399	10,188	23,781	1,393	15,952	2,956	4,57,089	88,864	2,20,805	11,62,427	

(a) On account of Park Connolly.

STATEMENT No. VI (b).

EXPENDITURE ON ARBORICULTURE IN THE CANAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4	5	6	7	8	9	10	11	12
District or Division.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, 1st Division ...	5,992	...	...	72	982	2,584	494	1,237	7,930	19,291	
Ditto, 2nd Division ...	3,623	...	...	...	4,559	323	8,844	...	...	17,349	
Ditto, 3rd Division ...	6,053	...	...	...	10,557	...	...	...	...	16,610	
Ditto, 4th Division ...	7,910	...	...	...	26,791	9,686	35	105	1,494	46,021	
Upper Sutlej Division, Inundation Canals	16,663	...	...	...	3,256	...	3,754	25	6,051	29,749	
Central Workshop Division ...	...	...	...	...	1,084	...	...	...	...	1,084	
Lower Bari Doab Canal, 2nd Division ...	4,536	100	100	...	...	4,467	249	3,100	832	13,384	
Ditto, 3rd Division ...	941	1,672	417	248	2,814	4,649	288	...	2,067	13,096	
Ditto, 4th Division ...	...	...	...	...	2,114	...	...	...	...	2,114	
Multan Canals Division ...	9,378	833	390	1,187	5,544	663	30,343	1,559	...	49,897	
Dera Ghazi Khan Division, Indus Canals...	6,816	1,258	1,838	1,662	6,864	19,723	24,802	7,215	...	70,178	
Muzaffargarh Canals Division ...	6,290	441	224	199	5,372	174	22,781	8,946	...	44,629	
Lower Sutlej Inundation Canals Division	3,479	448	981	570	2,947	413	4,379	795	...	14,012	
Western Jumna Canal, Karnal Division ...	9,660	115	...	...	2,724	...	...	...	...	12,499	
Ditto, Delhi Division ...	15,949	689	...	...	...	...	373	3,019	...	20,030	
Ditto, Hissar Division ...	3,913	...	...	261	3,918	1,206	1,570	364	4,836	16,068	
Ditto, Rohtak Division...	...	...	...	...	4,669	...	...	...	...	4,669	
Sirhind Canal, Ferozepore Division ...	3,342	...	24	...	10,462	...	1,040	...	...	14,868	
Ditto, Ludhiana Division ...	7,195	...	...	...	16,454	376	3,755	...	...	27,780	
Ditto, Patiala Division ...	6,576	...	140	...	3,306	...	452	...	...	10,474	
Ditto, Bhatinda Division ...	8,151	...	...	...	2,767	1,616	1,183	179	...	13,896	
Upper Chenab Canal, 3rd Division ...	4,031	84	3,286	...	13,317	2,726	334	319	6,138	30,285	
Ditto, 4th Division ...	4,374	...	...	10	826	1,381	...	13	...	6,604	
Ditto, 5th Division ...	2,927	1,118	...	...	877	1,619	...	1,527	204	8,272	
Lower Chenab Canal, Khanki Division ...	13,156	696	940	...	11,798	...	4,913	6,172	6,779	44,454	
Ditto, Lyallpur Division...	4,007	...	...	...	14,010	1,404	3,843	2,072	4,750	30,086	
Ditto, Lower Gugera Division...	7,245	196	...	...	25,800	4,094	...	994	...	38,389	
Ditto, Upper Gugera Division...	4,220	...	...	...	17,464	...	3,982	1,427	9,791	36,884	
Ditto, Jhang Division ...	7,259	2	...	...	6,693	20	5,079	1,345	2,844	23,242	
Ditto, Burala Division ...	5,183	178	...	...	4,707	11,082	5,176	406	11,898	38,630	
Upper Jhelum Canal, 1st Division ...	3,946	1,000	...	...	...	...	2,318	267	...	7,531	
Ditto, 2nd Division ...	...	...	...	...	...	...	...	...	...	...	
Ditto, 3rd Division ...	2,880	...	...	78	5,918	13,124	...	942	2,118	25,060	
Ditto, 4th Division ...	782	...	...	562	2,653	3,186	1,463	497	...	9,143	
Ditto, 5th Division ...	403	418	50	310	4,557	3,620	960	470	1,368	12,156	
Lower Jhelum Canal, 1st Division ...	6,198	...	1,469	...	5,160	438	7,187	...	6,155	26,627	
Ditto, 2nd Division ...	18,905	...	1,534	620	8,334	695	38,050	11,546	...	79,684	
Ditto, 3rd Division ...	8,396	...	...	...	17,066	11,394	5,493	12,462	11,412	66,223	
Shahpur Inundation Canals Division	...	...	...	...	...	...	...	...	...	...	
Total for 1911-12 to 1913-14 ...	2,20,420	9,248	11,393	5,779	2,56,644	1,00,663	1,83,140	67,005	86,637	9,40,968	
Total for 1908-09 to 1910-11 ...	1,98,540	6,956	11,879	6,337	2,28,378	79,186	1,25,432	36,365	93,167	7,86,190	

STATEMENT No. VI (c).

EXPENDITURE ON ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING
THE TRIENNIAL PERIOD 1911-12 TO 1913-14.

1	2	3	4	5	6	7	8	9	10	11	12	
District or Division.	WORKS.									ESTAB- LISH- MENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.			
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and ave- nues.	Extension of groves and avenues.				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
Rawalpindi Division ...	252	...	504	252	252	...	2,712	1,008	22,703	27,683		
Kangra Division ...	...	...	1,311	...	...	...	7,831	...	...	9,142		
Lahore Division, No. I ...	...	...	840	...	...	...	4,939	...	...	5,779		
Lahore Division, No. II ...	...	450	434	266	...	...	3,755	2,233	...	7,188		
Jullundur Division ...	...	...	4,000	2,300	2,000	2,211	2,500	1,500	479	15,490		
Lyalpur Division ...	2,000	...	700	50	...	...	11,000	850	600	15,200		
Multan Division ...	...	...	...	...	4,215	...	...	...	...	4,215		
Ambala Division ...	55	22	1,699	2,359	...	10,014	7,779	6,075	545	28,548		
Delhi, 1st Circle ...	...	...	...	...	...	...	2,944	...	...	2,944		
Delhi, 2nd Circle ...	...	...	...	...	...	...	300	...	...	300		
Gurgaon Division ...	...	...	1,800	...	...	...	7,507	...	...	9,307		
Total 1911-12 to 1913-14 ...	2,307	472	11,288	5,727	6,467	12,225	51,267	11,716	24,327	1,25,796		
Total 1908-09 to 1910-11 ...	2,951	...	8,276	2,613	4,136	2,716	47,778	12,600	15,923	96,993		

**Punjab Arboriculture Report,
1914-15 to 1916-17.**

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PROGRESS REPORT
ON
ARBORICULTURE IN THE PUNJAB

For the Triennial Period 1914-15 to 1916-17.



Lahore :

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, PUNJAB.

1917.

Proceedings of His Honour the Lieutenant-Governor of the Punjab in the Forest Department, No. 3819, dated 18th February 1918.

READ —

The Progress Report on Arboriculture in the Punjab for the triennium 1914-15 to 1916-17, submitted with the letter from the Conservator of Forests, Punjab, No. 2414, dated 10th October 1917.

REMARKS.—The total length of District Board and Municipal roadside avenues decreased during the triennium by 72·29 miles: 864·89 miles were successfully planted, and in all districts the length planted exceeded the length of failures, while in some there were no failures at all. The principal additions were in Kangra (84 miles), Sialkot (64), Gujrat (63), Rawalpindi (55), Ferozepore (64) and Multan (64). In Hoshiarpur where, however, roads are already well stocked, additions amounted to only six miles, in Karnal 7, and in Jullundur 1·13. The final decrease was due almost entirely to corrections of previous figures, which amount to 732·15 miles, 499 being in Kangra, but no explanation has been given of these high figures. In reality, therefore, the progress in planting has been considerable.

2. The former classification of districts, which the extension of canal irrigation had rendered obsolete, was recently revised, and districts are now classed as submontane districts, plains districts with good irrigation facilities, and plains districts with poor irrigation facilities. In the first class arboriculture presents no great difficulties and ought already to yield a substantial profit: all except Kangra do in fact now show a surplus, while in Sialkot and Hoshiarpur the gross revenue exceeded a lakh. In the second class Ferozepore, Jullundur and Amritsar are the only districts that report a surplus, but several others, notably in the canal colonies, should be able to show a handsome profit in a few years' time. In the third class only Dera Ghazi Khan shows a small and probably fortuitous surplus.

The gross revenue to local bodies from arboriculture was Rs. 10,32,902 as against Rs. 9,41,418 in 1911-12 to 1913-14, while expenditure rose from Rs. 11,92,006 to Rs. 13,72,343: the deficit has therefore risen from Rs. 2,50,588 to Rs. 3,39,441. This result is at first sight discouraging, but is mainly due to the increasing attention that is being given to the subject in the less favoured districts of the province, where the provision of shade trees along roadsides justifies financial loss. In Montgomery, for instance, special efforts were made in the Sutlej tahsils, but 19 out of 39 miles planted failed, while in Multan 55 miles were successfully planted and 19 failed. The financial results may, therefore, be accepted with equanimity, and it may be hoped that if the efforts of local bodies are better regulated in future, the deficit will be gradually converted into a surplus.

3. District reports seldom indicate any particular enterprise on the part of District Boards and Municipalities; some local bodies have drawn up plans of operations, but find them difficult to carry out. It is, however, clear that many district boards are rightly aiming at more variety of species in planting, and the *Nim*, *Terminalia* and *Eucalyptus* are steadily coming into favour. There are obvious advantages in encouraging within reasonable limits non-deciduous species such as the *Nim* where shade is specially needed, and the mango and the varieties of the fig should be encouraged where they can be grown with success. Efforts are being made in most districts to secure the services of better qualified men to supervise operations. The Gurdaspur and Multan Boards have men who were trained in the Lawrence Gardens at Lahore: Ambala and Rawalpindi have retired Forest Rangers; and the Superintendents at Amritsar, Gujranwala, and Karnal have studied at the Lyallpur Agricultural College. The value of supervision is well exemplified in the Lahore Municipality where only 100 out of 4,940 plants are reported to have failed, and where the general appearance of the roads and public gardens has been greatly improved in recent years by judicious fellings and the plantation of a large variety of graceful trees. The example of Lahore is commended to

the other large municipalities, few of which make adequate use of the facilities provided by canal extensions, tube-wells, etc., for extending arboriculture.

4. The figures in the report regarding areas under the management of the Irrigation Department are somewhat difficult to follow. But the most striking feature is the high percentage of failure. While 870 miles of canal banks and roads were successfully planted during the triennium, 285 miles failed, giving a percentage of failure nearly double that of the previous triennium. Similarly in plantations under the management of the department there has been an increase of 3,849 acres successfully planted, but failures totalled 1,463, a percentage of 43·7 as against 40·23 in the previous period. Many failures are attributed to bad soil, but the Lieutenant-Governor is unable to accept this as an adequate explanation. The financial results are slightly better than in the previous triennium, expenditure having declined by some Rs. 55,000 and receipts risen by Rs. 10,000. But only 6 canal divisions out of 41 have hitherto earned a surplus, including only one each on the two oldest canals in the Province, the Upper Bari Doab and Western Jumna. The explanation of these disappointing results and the remedy suggested are discussed below.

5. The Buildings and Roads Branch of the Public Works Department planted 103·28 miles of new avenues, and of a total length of 966 miles suitable for tree-planting 840 have now been satisfactorily stocked. There has been a slight decrease in revenue and a large increase in expenditure, the final deficit being Rs. 1,48,848 as against Rs. 40,805 in the previous period. But the Lieutenant-Governor is glad to notice the increased attention which roadside arboriculture is receiving, and he considers the progress made during the last two favourable monsoons is decidedly encouraging.

6. The following extract from a note recorded by the Lieutenant-Governor in August 1917 may suitably be reproduced here:—

Both the Irrigation and Roads and Buildings Branches have done much and are still doing a good deal to provide avenues along the main roads and canals. But their object is primarily to provide shade rather than to work the land available to the best economic advantage from the forest standpoint. They, in fact, have not and do not profess to have the expert knowledge or the trained establishment necessary for the latter. Hence, though we find many splendid avenues of trees in places along the main canals and the great Government roads, we also find—

- (i) that arboriculture is not seriously attempted where conditions are not favourable for initial success, e.g. (a) most of the Grand Trunk Road from Shahdara to Hasan Abdal and considerable sections between Ludhiana and Karnal, (b) sections of the canals where the soil shows signs of *Kallar* ;
- (ii) that even where arboriculture is seriously undertaken the areas available are not fully utilised. Often only a single line of trees is grown along a canal bank, or a line on each side of a main road to provide shade whereas there is space for several rows of trees in the background ;
- (iii) that arboriculture has not been carried out on scientific lines, e.g., (a) *kikar* is planted where more valuable trees such as *shisham*, *tun*, *mangoes*, etc., would succeed, or (b) *shisham*, *tun*, &c., are attempted in dry or sterile soils only suited for *kikar*, or (c) the *mulberry*, which is a useful economic asset in places with good rainfall—Gurdaspur, Amritsar, Ludhiana, Ambala, &c.—is not attempted at all ;
- (iv) that a general and serious defect is that where a good avenue has developed, it is allowed to go on till the trees decay, whereas expert supervision would secure that they were cut and sold while still in their prime and that young trees were planted in time to take their place.

Other instances of defective working might be added. For these the Public Works Department is not to be seriously taken to task as arboriculture is with them only a by-product. But it is evident that in the areas mentioned, which must amount to many tens of thousands of acres, we have an asset of enormous potential value, and that in the interests both of Government and of the public we should not delay to develop it on sound lines.

The only sound line is to treat those areas on correct scientific principles of forestry, and this is only possible if the areas in question as far as their arboriculture is concerned are made over to the Forest Department with necessary safeguards for the Irrigation and Roads and Buildings interests involved.

His Honour's suggestion was considered by a committee consisting of the three Chief Engineers, the Revenue Secretary and the Conservator of Forests. The Committee, while agreeing that arboriculture on roads and canal banks would be more successful if controlled by Forest experts, were of opinion that instead of handing over the areas in question to the Forest Department, it would be preferable to provide the Public Works Department with the necessary expert establishment. With a view to determining the strength of that establishment, and to secure the benefit of the Conservator's advice on the technical aspect of the problem, further information is being collected regarding the areas and natural advantages, *e.g.*, proximity to markets and railways, of all avenues and plantations now managed by both branches of the Public Works Department. This should shortly be completed, and His Honour hopes that practical proposals will be submitted to him at an early date.

7. The first two years of the triennium had a short monsoon, and the last two years a failure of the winter rains. But considering these adverse influences the results were not unsatisfactory. It is true that the improvement in avenues under all kinds of management has not been maintained: and that the percentage of failures has risen from 19.1 to 25.9. Moreover, while revenue has risen from Rs. 14,47,812 to Rs. 15,41,656, expenditure increased from Rs. 22,58,770 to Rs. 24,83,983, and the final deficit was thus Rs. 9,42,327 as against Rs. 8,10,958 in the last period. These results are, however, partly due to the climatic conditions referred to, and also to the fact that as operations extend to less favoured localities the cost and the risk of failure tend to increase. Local bodies would do well to remember in selecting areas for tree-planting that the value of timber depends chiefly on the nearness of markets and facilities for transport, and that improvement in communications should, therefore, mean an increased income from arboriculture. Insufficient attention too seems to have been given in some places to the selection of suitable species and suitable soils. In this connexion His Honour would draw attention to the recent publication of a vernacular version of Messrs. Casson and Mustoe's valuable hand-book, copies of which should be widely circulated to schools and local bodies, and hopes that it will stimulate a practical interest in the subject. The Lieutenant-Governor has been glad to see that in some Government and Board Schools, notably the Government High School at Lyallpur, the teachers have encouraged the planting of trees and shrubs by their pupils in the land attached to the school; but very much more could be done in this direction.

ORDER.—Ordered that the above remarks be printed and circulated with the report as usual; also that they be published in the *Punjab Government Gazette* and forwarded to the Secretary to Government, Punjab, Public Works Department, Buildings and Roads Branch, the Chief Engineer, Irrigation Works, Punjab, the Conservator of Forests, Punjab, and all Commissioners of Divisions in the Punjab.

By order of His Honour the Lieutenant-Governor, Punjab,

H. D. CRAIK,

Revenue Secretary to Government, Punjab.

No. 2414.

FROM

R. MCINTOSH, ESQUIRE,
Conservator of Forests, Punjab,

TO

THE REVENUE SECRETARY TO THE GOVERNMENT
OF THE PUNJAB.

Dated Lahore, the 10th October 1917.

SIR,

I HAVE the honour to submit the Progress Report on Arboriculture in the Punjab for the period 1914-15 to 1916-17. The arrangement of the subject is the same as in the previous report.

2. Figures for Delhi Province, Municipality, and Provincial I and II Circles have been excluded from the opening balance of the present report.

3. This report was due to Government on the 1st September 1917 but has been delayed on account of late receipt of reports from most of the officers concerned. Out of 82 reports only 28 were received on the due date, viz., 1st July 1917, and the remaining 54 were received as follows :—

On different dates in July 1917	...	...	42
In August 1917	...	...	11
In September 1917	...	...	1

Numerous objections were issued and the replies to some of them were received as late as 9th October 1917.

I have the honour to be,

SIR,

Your most obedient servant,

R. MCINTOSH,
Conservator of Forests, Punjab.

Progress Report

ON THE*

Arboriculture in the Punjab

For the Triennial Period 1914-15 to 1916-17.

A—DISTRICT ARBORICULTURE.

District Boards and Municipalities.

(a)—GENERAL.

1. The total length of avenues under District Boards and municipalities* in the Punjab at the commencement of the period under review was 9,330·43 miles and at its close 9,238·14 miles, showing a decrease for the triennial period of 72·29 miles as against an increase of 356·04 miles during the previous triennial period.

2. The total length of roads suitable for planting up with avenues is 15,223·39 miles, out of which 61·42 per cent. had been planted up prior to the beginning of the period under review.

3. Statement No. IV (a) shows the progress and changes in the avenues in each district, from the perusal of which it will be seen that the net decrease of 72·29 miles for the period under report is made up as follows :—

Additions.

	Miles.
(i) Corrections of previous figures	29·99
(ii) Successfully planted	864·89
(iii) Transferred from other management	59·21
(iv) Other causes	18·49
Total	972·58

Deductions.

(i) Corrections of previous figures	732·95
(ii) Failures	172·76
(iii) Felled	110·89
(iv) Transferred to other management	23·17
(v) Other causes	5·10
Total	1,044·87

Net decrease ... 72·29

4. All districts show that the length of avenues planted exceeded the length of failures. It is also satisfactory to note that in several districts in which considerable lengths of avenues were planted there were no failures at all, e.g., Kangra (84 miles), Hoshiarpur (7 miles), Lyallpur (56 miles), Lahore (18 miles), Shahpur (38 miles), Rohtak (11 miles), Hissar (5 miles) and Municipality (7 miles), Attock (3 miles), Dera Ghazi Khan (2 miles) and Municipality (9 miles).

5. In the Gurgaon District and Rawalpindi, Attock, Karnal and Chiniot Municipalities no planting of avenues was carried out during the triennial period under report.

6. Shahpur Municipality with a total length of 13·88 miles suitable for avenues is the only one which shows that all roads have been completely planted up with avenues.

* The following 15 municipalities maintain avenues :—

Sialkot, Gujrat, Rawalpindi, Jhang, Chiniot, Lahore, Amritsar, Shahpur, Hissar, Attock, Multan, Dera Ghazi Khan, Gujranwala, Jhelum and Karnal.

7. In accordance with Punjab Government letter No. 92-Forests, dated 29th February 1916, the districts are in the present report classified under the following three groups for the purpose of arboricultural returns:—

- (a) *Hill and submontane districts with good rainfall.*—Simla, Ambala, Kangra, Hoshiarpur, Gurdaspur, Sialkot, Gujrat and Rawalpindi.
- (b) *Plains districts with good irrigation facilities.*—Karnal, Ludhiana, Ferozepore, Jhang, Jullundur, Montgomery, Lyallpur, Lahore, Amritsar, Gujranwala, Shahpur and Rohtak.
- (c) *Plains districts with slight or no irrigation facilities.*—Gurgaon, Hissar, Jhelum, Attock, Mianwali, Multan, Muzaffargarh and Dera Ghazi Khan.

An examination of the results in the above groups of districts gives the following figures for the period under review:—

- (a) *Hill and submontane districts with good rainfall.*—345·64 miles were successfully planted up and 69·34 miles failed. The total length planted up to date is 3,151·75 miles out of a total length of 4,420·43 miles of roads, so that 29 per cent. of the total length still remains to be planted up.
- (b) *Plains districts with good irrigation facilities.*—Planting was successful over 372·30 miles and unsuccessful over 69·22 miles. Of 7,079·73 miles of roads suitable for planting 4,398·85 miles were under avenues at the close of the triennial period, leaving a balance of 2,680·88 miles, or 37 per cent., remaining to be planted.
- (c) *Plains districts with slight or no irrigation facilities.*—146·95 miles were successfully planted and 34·20 miles failed. Of 3,723·23 miles of roads suitable for planting there were 1,707·54 miles under avenues at the close of the period while 2,015·69 miles, or 54 per cent., remained unplanted.

8. At the commencement of the triennial period the area under groves was 4,872·52 acres and at the close of the period 4,212·44 acres, showing a decrease of 660·08 acres, whereas during the previous triennial period there was an increase of 6·39 acres.

The changes which took place in each district are shown in Statement No. III (a).

The decrease of 660·08 acres is made up as follows:—

<i>Additions.</i>					Acres.
Corrections of figures	...	...	...	...	144·39
Successfully planted	...	...	...	...	30·81
Transfers from other heads	...	...	...	...	9·09
Transfers from other management	...	...	...	...	52·50
Other causes	...	...	...	...	21·37
Total					258·16
<i>Deductions.</i>					
Failures	...	...	...	...	2·71
Transfers to other heads	...	...	...	...	0·81
Transfers to other management	...	...	...	...	101·96
Other causes	...	...	...	...	812·76
Total					918·24
Net decrease					660·08

From the above figures it will be seen that the actual area successfully planted was 30·81 acres and the failures amounted to 2·71 acres, whereas during

the previous triennial period 30.73 acres were successfully planted and 35.96 acres failed. The decrease in the total area under groves is due to the sale of groves grown by colonists in 746 acres in Sohag Para Colony in the Montgomery district to owners of the land, the sale proceeds being credited to Government. The Province is particularly deficient in good camping topes and it would add greatly to the amenities of touring in the new colonies if this matter received attention now while it is still possible to set aside land for this purpose.

The districts in which groves were successfully planted are the following :—

Karnal, Amritsar, and Mianwali and Hissar Municipality.

9. The area under plantations at the commencement of the triennial period was 1,061.55 acres and at the close of the period 1,171.36 acres, showing a net increase of 109.81 acres.

Details of the operations in each district are shown in Statement No. II (a).

The increase of 109.81 acres is made up as follows :—

<i>Additions.</i>				Acres.
Corrections of previous figures	...	...	...	3.42
Successfully sown or planted	...	...	...	30.64
Transfers from nurseries	...	...	...	2.58
Transfers from other management	...	...	...	164.21
Total				200.85
<i>Deductions.</i>				
Corrections of previous figures	...	...	...	2.50
Failures	...	...	...	10.77
Transfers to other heads	...	...	...	0.09
Other causes	...	...	...	77.68
Total				91.04
Net increase				109.81

There was, therefore, an actual increase of 19.87 acres in the area under plantation.

The increase in the area is due to the establishment of a new reserved forest 164.21 acres at Mianwali in 1916. In the Simla, Ferozepore and Gujranwala Districts plantations were successfully established.

10. At the commencement of the period the area under nurseries was 1,326.80 acres and at its close 1,297.96 acres, showing a net decrease of 28.84 acres, which is made up as follows :—

<i>Additions.</i>				Acres.
Corrections of previous figures	...	...	...	8.00
Extension of nurseries	...	...	...	38.01
Transfers from other heads	...	...	...	0.81
Total				46.82
<i>Deductions.</i>				
Corrections of previous figures	...	...	...	17.77
Failures	...	...	...	3.75
Transfer to groves or plantations	...	...	...	11.68
Other causes	...	...	...	42.46
Total				75.66
Net decrease				28.84

The actual area brought under nurseries was 38.01 acres and 3.75 acres failed, so that there was a real increase of 34.26 acres under this head.

(b)—DETAILS OF THE WORK DONE.

Hill and submontane districts with good rainfall.

11. *Ambala*.—The length of avenues was increased by 42·09 miles during the period under report and 6·50 miles failed for want of water. Attention has been paid to putting out bigger plants to ensure success. Of the 16,453 plants put out 14,355 are alive. The area under groves increased from 37·02 to 37·06 acres and 2·73 acres of new nurseries were established of which 0·01 acre failed owing to the soil being too sandy, 0·04 acre was transferred to groves and an area of 0·35 acre was given up as having been exhausted.

The Superintendent of Arboriculture who was employed in the previous period under report and who held a diploma from the Lyallpur Agricultural College resigned and was replaced by a retired Forest Ranger.

Kangra.—Eighty-four miles of road were planted successfully with trees during the triennial period. A deduction of 449·25 miles is due to correction of areas. New nurseries of 0·62 acres were established, 7·76 acres were deducted on account of correction of areas and an area of 0·04 acres was transferred to shamlat land.

Hoshiarpur.—6·75 miles of avenues were successfully planted during the period under report. Gaps caused by the removal of dead, fallen and useless trees were also filled up with young plants. The jail garden measuring 6·13 acres handed over to the District Board for maintenance during the last triennial period, was re-transferred to the Jail Department during the period under report. The management of the gardens at Sadr and tahsils calls for increased supervision. Arboricultural work was supervised by a retired Forest Ranger in the three Western tahsils while the Una tahsil work was in the care of a tahsil sub-overseer who takes particular interest in his work. The number of trees with leaves suitable for fodder planted during the period was 4,709.

Gurdaspur.—The length of avenues was increased by 27·50 miles, of which 5·71 miles failed for want of water. The gaps were filled up with some 10,933 plants of shisham, mango, jamun, mulberry and siris, and there were comparatively few failures though considerable damage continues to be done by browsing and illicit lopping. There was no change in the area of groves. A new nursery of 1·89 acres was opened in the Gurdaspur tahsil but one of 0·37 acre was closed in the Batala tahsil as it did not serve its purpose. Arrangements are being made to start nurseries for the production of mulberry plants in connection with the anticipated revival of the silk industry in the district.

During the year the Superintendent of Agriculture, a man from the Forest College at Dehra Dun, as well as the roadside daroghas relinquished their posts and were replaced by men trained at the Lawrence Gardens, Lahore.

Experiments in planting blanks in old avenues with eucalyptus have so far proved a success.

Sialkot.—During the triennium 64·75 miles of avenues were planted mainly with kikar and shisham, but 15 miles are reported to have failed. Thirty-nine miles were felled for replanting on the basis of a 40-year rotation which has been adopted by the District Board. A reduction of 130·37 miles was made due to the correction of previous figures. There was no change in the area under groves. There is an increase of 2·25 acres under plantations, due to an extension made to the largest plantation under the District Board and to a plantation at one of the bungalows, 4·63 acres of new nurseries were established. The reduction of 11·66 acres in area is due to the abandonment of some nurseries used up and not required and 6·32 acres due to correction of previous figures. Much damage is reported to have been done by illicit browsing of goats and pound-fees have been doubled in order to check the nuisance.

Sialkot Municipality.—The length of roads planted during the triennial period was 0·80 mile. No new work under groves, plantations and nurseries was carried out.

Gujrat.—The length of roads planted during the period under report was 63·86 miles, of which 22·38 miles failed on account of drought and frost. Groves show a decrease of 9·8 acres due mainly to the transfer of 7·8 acres to the Moslem Zamindara Association for constructing an agricultural school for zamindars. Arboriculture in this district is now receiving systematic attention. Untrained tahsil daroghas are being removed and trained men provided in their places. Working schemes are also being carefully prepared.

Rawalpindi.—55·75 acres of avenues were planted during the period under report of which 19·75 miles failed on account of scarcity of water and 10 miles were felled showing a net increase of 26 miles. Much attention is being given to arboriculture. A retired Forest Ranger of the Forest Department was engaged as Superintendent. He has succeeded in making some improvement in avenues and in reducing expenditure. The district, however, is dry and rocky and the people are opposed to tree-planting near their cultivated lands, so that progress is not as rapid as is desired. The decrease of 0·09 acre in the groves is due to the transfer of the area to nurseries: 0·69 acre of nurseries were established; 1·43 acres failed owing to the scarcity of water and difficulty of irrigation; 0·16 acre of the Choha Khalsa nursery in Kahuta tahsil was washed away. In the *Rawalpindi Municipality* no new work under avenues and groves was undertaken during the period under report.

Plains districts with good irrigation facilities.

Karnal.—Seven miles of avenues were planted during the period under report out of which 1·12 miles failed on account of scarcity of canal water. 12,960 trees were planted and 7,880 died or were blown down during the triennial period and 0·75 miles was felled. 18·08 acres of groves and 1·13 acres of nursery were planted successfully. The three posts of Arboriculture Inspector have been abolished and one post substituted. This is filled by a man who has undergone two years' training at the Lyallpur Agricultural College. In the *Karnal Municipality* no new work under avenues was carried out and no groves, plantations or nursery exist.

Ludhiana.—24·75 miles of avenues were successfully planted of which 10·50 miles failed for want of water. No new work under groves was carried out. 0·75 acre of nurseries was planted of which 0·23 acre failed. A trial sowing of the varieties mentioned by His Honour the Lieutenant-Governor in his review on the Progress Report on Arboriculture for the triennium 1911-12 to 1913-14 was made in the latter part of 1915, but though germination was good the subsequent growth of the plants was very slow and did not reach the transplanting stage. The white ant exterminator mentioned last year, though very good for a short time, was not of a permanent nature and its further use was discontinued. In all about 17,330 two-year old plants were supplied from the nurseries for renewals in existing avenues and the demands from the Public Works Department, Roads and Buildings Branch, the Ludhiana Sub-Division of the Sirhind Canal, Abohar Branch and the North-Western Railway were fully met from the existing nurseries free of charge. It is estimated that about 3,000 young plants were thus supplied.

Ferozepore.—64·50 miles of avenues were successfully planted during the period under report of which 20·50 miles failed owing to lack of water and frost. In Ferozepore tahsil considerable damage was done to young trees on roads by illicit camel browsing. No change took place under groves and nurseries. At Kairuwala plantation trees were put down in 25 acres of which 10 acres failed and the remainder are doing well.

The receipts from sale of trees, etc., during the period under report amounted to Rs. 76,459 against Rs. 74,332 spent on arboriculture or a net gain of Rs. 2,127.

Jhang.—41.50 miles of avenues were newly planted during the triennial period of which 8.05 miles failed. Groves increased by 1.87 acres and steps are being taken to increase the area of nurseries considerably. The total expenditure on arboriculture during the period amounted to Rs. 52,510.

The Sanitary Inspector was sent to Lahore for training at the Lawrence Gardens. Unfortunately, after undergoing some months training he died. A Sub-Committee of the District Board was appointed in 1916 to deal with the District Board gardens and wells and has effected a considerable improvement in the management of the former.

In the Jhang Municipality one mile of avenues was newly planted and about one mile was felled or failed during the triennium.

Jullundur.—1.13 miles of avenues were successfully planted during the triennial period, 1.25 acres came under groves by transfer from nurseries while 0.66 acre was given on lease. The area of plantations has decreased by 18.30—

(a) 7.30 acres were sold as being no longer required.

(b) Eleven acres were given on lease for cultivation. The decrease of 1.25 acres under nurseries is due to the transfer of areas to groves and to the nursery at Nur Mahal being no longer required.

The question of removing the cactus which disfigures the road sides is being taken up.

Montgomery.—Since the extension of Canal irrigation in the Ravi tahsils efforts are being made to develop arboriculture. Thirty-nine miles of avenues were planted during the period under report but 19 miles failed owing to want of proper irrigation. Shisham and kikar are the principal trees planted and show good results. The total number of trees planted was 11,977. 1.26 acres were added to nurseries during the triennium. These were sufficient to meet requirements as seedlings are readily obtainable from forest and canal plantations. It is satisfactory to note that there is a marked improvement in arboriculture in this district with less expenditure during the period under report as compared with the previous triennial period. Expenditure on establishment is steadily rising but with facilities in the supply of water, conditions are much more favourable to successful planting than they have been hitherto.

Lyallpur.—During the period under report 56 miles have been added to avenues by new planting and gap filling. About 22.50 acres under groves were cleared and used for the erection of buildings and crop production. Five nurseries were successfully established on a total area of 2.05 acres in various suitable places.

Attempts to raise mango, jaman and eucalyptus have in most cases failed owing to the attacks of white ants, and shisham and kikar still continue to give the best results.

During the period under report the supervision of arboricultural operations which has hitherto been entrusted to Lambardars was entrusted to an Inspector of Agriculture. This arrangement having proved a failure the supervision was entrusted to the District Engineer. After a trial of two years this arrangement was modified and arboricultural operations on kacha roads are now under the control of Tahsildars while the District Engineer continues to control the work on all pucca roads.

Lahore.—During the triennial period under the District Board 17.75 miles of avenues and 3.82 acres of nurseries were successfully planted. Gaps were filled up on important roads. The rules framed under the advice of Mr. Humphreys worked well as long as arboricultural operations were properly supervised by the District Board members.

Lahore Municipality.—During the triennial period from 1st April 1914 to 31st March 1917 the following roads have been newly planted with trees, namely, Hall, Cooper, Brandreth and Fane Roads and the Upper Mall extension up to Cantonment West Level Crossing. Particular mention may be made

of the last as it is of considerable length planted with four rows of pipal. The length planted approximately amounts to three miles, making a total length of 98·83 miles of avenues.

Four thousand nine hundred and forty trees comprising the pipal, terminalia arjuna, terminalia belerica, eucalyptus citriodora and teriticornis, ficus indica, etc., were planted against 5,207 during the corresponding triennial period. Besides the above shrubs such as the Duranta, Lime, Clerodendron, Dodonea numbering 20,602 were planted against 10,939 in the previous triennial period. Out of 4,940 trees planted only 100 failed.

During the year under report Rs. 1,30,989 were spent on arboriculture and improvements of gardens as against Rs. 1,08,211 in the corresponding period of the previous three years.

The sale proceeds of trees, grass and fruits amounted to Rs. 23,334, as against Rs. 26,392, during the previous triennial period. The difference of Rs. 3,058, in the sale proceeds is due to the fact that nearly all the fruit trees in the City Garden have been cut down. A large variety of trees have been planted throughout the main roads in Lahore to replace unsightly shisham.

Amritsar.—During the period under report 30·05 miles of avenues were planted, of which 4·43 miles failed owing to scarcity of rains and 17·91 miles were felled. 6·15 acres of groves were planted and 1·21 acres failed. Dry and useless trees were removed from 3·64 acres.

The District Board does not propose to raise any plantations as it is considered better to lease available land for cereal crops rather than to raise trees; 2·26 acres of nurseries were added of which 0·18 acre were destroyed owing to the nursery being flooded. 0·32 acre were destroyed by cattle and 0·66 acre were transferred to groves. The commonest roadside tree is shisham but mango, jaman, nim, terminalia arjuna and eucalyptus are being introduced. A 3-year programme for the year 1917-19 as proposed by the Commissioner, Lahore, has been drawn up for rotational felling and planting of roadside trees. The Arboriculture Superintendent is a trained man from the Lyallpur Agricultural College.

In the Amritsar Municipality no new work under groves and plantations was carried out during the period under report.

Gujranwala.—37·63 miles of roads were planted with trees during the period under report of which 5·50 miles failed. 5·64 miles of metalled roads in the Civil Station were transferred to the Gujranwala Municipal Committee and a deduction of eight miles is due to correction of previous figures.

Two acres under plantations were planted successfully.

5·84 acres were added to nurseries during the period under report, of which 1·09 acres failed and 2·12 and 5·23 acres were transferred to plantations and roadside avenues, respectively. The District Board maintains 12 gardens and all arboricultural work is controlled by a graduate of Lyallpur Agricultural College.

Shahpur.—Thirty-eight miles of avenues were successfully planted during the period under report and 11·50 miles were transferred by the District Board to the management of other local bodies, leaving 558·40 miles with the Board at the end of the period. The increase of 144·39 acres under groves is due to remeasurement at the recent settlement. 52·50 acres out of 1,244·94 acres were transferred to the Shahpur Chharoni Notified Area and eight acres were given in exchange for land acquired for Government purposes, leaving 1,184·44 with the District Board at the end of the period under report. Fifteen acres of nurseries have been brought under cultivation for colony purposes in the period under report, leaving 1,059·9 acres under nurseries at the end of the period.

In the Municipal Committee and Notified Areas one acre of avenue was successfully planted and 34·50 miles in Sargodha City and Civil Station formerly under the Irrigation Department were transferred to the Municipal

Committee, bringing the total area under local bodies to 60·88 acres at the end of the period under report.

Rohtak.—Eleven miles of avenues were successfully planted. 14,466 trees were planted as compared with 11,432 in the previous three years. The number of trees which died was 3,717 as against 2,823 in the previous triennium. The higher death rate of 25 per cent. was due mainly to the scanty supply of water. Some 50 eucalyptus plants were purchased from Lahore and planted but all of them were damaged by white ants. There was no change under groves. There were seven nurseries in the district, one more nursery at Sadr Rohtak with an area of 0·38 acre having been added during the period under report. All the nurseries are in good condition and are chiefly planted with shisham, nim, beri, jaman, siris, bakain, mango, etc. The income was, Rs. 16,921 and expenditure Rs. 42,444 as compared with Rs. 15,337 and Rs. 46,001 respectively, for the previous triennium.

Plains districts with slight or no irrigation facilities.

Gurgaon.—No new work has been carried out under avenues, groves and plantations during the period under report, but gaps in existing avenues were successfully filled up. 14,225 trees were planted against 11,058 planted during the last triennium. 1·94 acres of new nurseries were made.

Hissar.—5 and 6·52 miles of avenue were successfully planted during the period under report by the District Board and Municipality respectively, 0·26 acre has been added to the District Board plantation at Sirsa. 0·36 and 0·39 acre have been added to nurseries by the District Board and municipalities, respectively.

The scanty precarious rainfall and dry climate hamper the progress of arboricultural operations. Efforts have been made by the District Board to improve the gardens and the following fruit trees have been planted:—

Bhawani tahsil garden	...	...	100 oranges.
" " "	...	...	10 malta oranges.
Hissar District Board garden	...	...	160 oranges.

Jhelum.—During the period under report 24·47 miles of roads under the District Board were planted of which 4·21 miles failed. The number of trees planted was 5,112 against 3,744 planted in the previous period. 2,144 trees were planted by municipalities in the district on a length of 6·48 miles, of these 33 per cent. failed. No change took place in the area of groves. 0·67 acre of nurseries were planted.

The District Board engaged the services of a separate Superintendent for their arboricultural operations. This officer supervised the plantations in the district under the general control of Tahsildars and Naib Tahsildars.

Attock.—Three miles of avenue were successfully planted by the District Board during the period under report. Gaps were also filled up over a mile of the roads. An area of 0·16 acre was added to groves by transfer from nurseries. No fresh area was added to nurseries.

Receipts from arboriculture during the period under report amounted to Rs. 5,786 as against Rs. 4,095 in the last triennium. The increase is chiefly due to regular and prompt disposal of dry and fallen trees. The expenditure was Rs. 13,772 against Rs. 10,433 incurred in the last period.

Mianwali.—During the period under report 15·50 miles of avenues were planted on the canal road from Mianwali to Nammal of which one mile failed. The net increase of 1·94 acre under groves after counterbalancing the decrease of 0·72 acre which was transferred to the head nurseries represents the area added to the station gardens at Sakesar. There was an increase of 164·21 acres under plantations due to the establishment of a new forest reserve at Mianwali in 1916. The area under nurseries increased by 1·72 acres.

The advent of the Nammal Canal offered favourable conditions for tree planting in the Civil Station at Mianwali and on the road from Mianwali to the canal head, a distance of about 16 miles along the canal. Ornamental trees are being substituted for the farash and kikar. Shisham plantations have been laid out in the Forest Reserve which has recently been started near the Civil Station of Mianwali. This plantation promises to become a very profitable property in the course of a few years.

The station gardens at the district headquarters were remodelled on the advice of the European Gardener. The station gardens at Sakesar were extended and improved during the period under report. The gardens at Musa Khel and Bhakhar continue to be maintained.

Multan.—During the period under report 55·07 miles of avenues were successfully planted, of which 19·12 miles failed. The increase of 9·85 and decrease of 46·05 miles, respectively, are due to remeasurement of length. The District Board has now engaged the services of two daroghas who have been trained under the Superintendent, Lawrence Gardens, Lahore.

Muzaffargarh.—During the triennial period under report the length of avenues was increased by 16·83 miles in which 12,904 trees, chiefly shisham, were planted. Eucalyptus trees were successfully planted in the suburbs of Alipore, Shahr Sultan, Muzaffargarh and Sananwan and are growing well. The total deduction of 12·48 miles is chiefly due to water-logging, floods, Seb land, and dust storms. An addition of 19·25 acres under groves is due to the extension of the Arabian date plantation. The decrease of 59·78 acres is detailed below :—

- (i) 35·53 acres transferred to encamping grounds and police bungalow.
- (ii) 22·75 acres sold with trees.
- (iii) 1·50 acres died owing to bad soil.

2·21 acres were added to nurseries. During the period under report a subordinate was sent for training in gardening and arboriculture at the Lawrence Gardens, Lahore.

Dera Ghazi Khan.—During the triennium under report the avenues under the District Board and municipalities were increased by two and nine miles, respectively. On completion of the Kot Chutta Jhok and Dera Ghazi Khan Pir Adil roads a total length of 15 miles will be available for planting.

(c)—FINANCIAL RESULTS.

12. The gross revenue from arboriculture during the triennial period under report was Rs. 10,32,902 or Rs. 91,484 in excess of that realized in the previous triennium, while expenditure was Rs. 13,72,343 or Rs. 1,80,337 in excess of that incurred in the previous triennial period.

For the period under report the deficit amounted to Rs. 3,39,441 as compared with a deficit of Rs. 2,50,588 during the previous triennial period. The highest gross revenue was realized in the Sialkot District with Rs. 1,27,601, while Hoshiarpur realized Rs. 1,02,287, Shahpur Rs. 87,712, Ferozepore Rs. 76,459 and Gurdaspur Rs. 52,524. The other districts which show a gross revenue between Rs. 30,000 and Rs. 50,000 are Gujrat, Rawalpindi Municipality, Amritsar Municipality, Jullundur, Amritsar, Ludhiana, Lahore Municipality and Jhelum.

The following districts and municipalities show a surplus on the arboricultural operations :—

Simla, Hoshiarpur, Gurdaspur, Sialkot, Gujrat, Rawalpindi, Rawalpindi Municipality, Ferozepore, Jullundur, Amritsar and Dera Ghazi Khan.

B—CANAL ARBORICULTURE.

13. The length of roads and canal banks suitable for avenues under the Irrigation Department increased during the triennial period under report from 10,596 to 12,330 miles. Statement No. IV (b) shows total additions

of 2,295·61 miles of avenues as compared with 1,857·65 miles during the previous period. This figure is made up as follows :—

	Miles.
Correction of figures	282·08
Successfully planted	870·00
Transferred from other management	1,126·03
Other causes	17·50
Total	2,295·61

The length of avenue successfully planted was 870 miles against 1,184 miles in the previous period. The following divisions succeeded in planting more than 50 miles of avenue during the period :—

Upper Bari Doab Canal, II Division, Lower Bari Doab Canal, Okara Division, Lower Bari Doab Canal, Khanewal Division, Lower Chenab Canal, Lower Gugera Division.

14. The total deductions amounted to 1,827·45 miles as detailed below :—

	Miles.
Correction of figures	291·64
Failures	285·23
Felled	44·47
Transferred to other management	1,160·53
Other causes	45·58
Total	1,827·45

The failures amounted to 285·23 miles as compared with 196·19 miles during the previous triennial period. The percentage of failures amounted to 32·78 against 16·57 in the previous period. The work of the period under report is therefore unsatisfactory.

15. There are no groves under the Irrigation Department.

16. The additions to the areas under plantations belonging to the Irrigation Department during the triennial period under report are given below, *vide* Statement No. II (b) :—

	Acres.
Correction of areas	647·78
Successfully sown or planted	3,349·10
Transferred from nurseries, etc.	5·23
Transferred from other management	5,306·99
Other causes	0·30
Total	9,309·40

The area successfully planted during the period under report shows an increase of 187·66 acres over 3,161·44 acres planted in the last triennial period.

17. The deductions were as follows :—

	Acres.
Correction of area	887·82
Failures	1,463·47
Transfers to other heads	2·66
Transfers to other management	5,306·99
Other causes	70·07
Total	7,732·01

1,463·47 acres failed as compared with 1,272·04 acres in the previous triennium and the percentage of failures comes to 43·70 against 40·23 in the previous period. It will be observed that the area planted or sown exceeds that of the previous period and the proportion which failed has increased. A large proportion of failures are attributed to bad soil.

18. The area under nurseries decreased from 28·05 to 21·29 acres. The main decrease is under the head "other causes."

19. The revenue and expenditure during the period under report amounted to Rs. 4,31,179 and Rs. 8,85,217 against Rs. 4,21,403 and Rs. 9,40,968 in the previous period. The deficit has decreased from Rs. 5,19,565 to Rs. 4,54,038. The following divisions show a surplus in their arboriculture operations :—

Upper Bari Doab Canal, 1st Division.

Western Jumna Canal, Delhi Division.

Sirhind Canal—Ferozepore, Ludhiana, Patiala and Rupar Divisions.

Most of the remaining divisions being new cannot be expected to show any surplus for many years.

C.—ARBORICULTURE IN PROVINCIAL DIVISIONS, PUBLIC WORKS DEPARTMENT.

20. The following abstract from Statement No. IV (c) shows the additions made to the length of avenues during the period under report—

	Miles.
Correction of previous figures ...	37·54
Successfully planted ...	106·28
Transfers from other management ...	52·45
Other causes ...	1·80
Total ...	198·07

The deductions during the same period were—

	Miles.
Correction of previous figures ...	38·70
Failures ...	18·15
Felled ...	4·58
Transfers to other management ...	55·09
Total ...	116·52
Net increase ...	81·55

106·28 miles of new avenues were planted during the period under report as compared with 131·91 miles in the previous period, while failures amounted to 18·15 miles against 14·36 in the previous period.

21. The area under groves at the beginning of the period was 638·07 acres and that at the end of the period 448·12 acres. Statement No. III (c) shows the details and reasons for the changes.

22. As shown in Statement No. II (c) the area under plantations at the beginning of the period under report was 35·20 acres and that at the end of the same period 224·24 acres. The large increase is mainly due to transfers from groves and nurseries.

23. The area under nurseries at the commencement of the period under report was 14·91 acres and at the end at the same period 24·57 acres. Details and reasons for the changes are shown in Statement No. I (c).

24. The revenue of the period under report amounted to Rs. 77,575 as compared with Rs. 84,991 in the the previous triennium, while the expenditure was Rs. 2,26,423 against Rs. 1,25,796, thus showing a deficit of Rs. 1,48,848 during this period against Rs. 40,805 in the previous period. More money has been spent on maintenance and extension of groves and avenues and on establishment. These charges have increased from Rs. 87,310 to Rs. 1,97,875. Lahore Division, No. II, is the only division which has shown a surplus.

D—GENERAL.

25. The following table shows in a concise form the extensions and failures which took place in avenues, groves and plantations under all kinds of management during the period under report as compared with the previous triennium :—

	1914-15 to 1916-17.		1911-12 to 1913-14.	
	Planted.	Failed.	Planted.	Failed.
Avenues (miles)	1,841.17	476.14	2,200.98	421.47
Groves (acres)	30.81	2.71	31.73	35.96
Plantations (acres)	3,380.54	1,474.24	3,186.69	1,288.19

Avenues have not maintained the marked improvement which was shown in the last report. Failures have amounted to 25.9 per cent. as compared with 19.1* per cent. of the last report and the length of miles actually planted has decreased considerably. Groves show an improvement but plantations again show a heavy percentage of failures 43.6 per cent. as against 40.4* for the last period. Failures are due partly to bad soil but inadequate and unskilled supervision must account for much of the want of success.

26. A statement showing the valuation of the standing timber is appended. The statement is incomplete as many officers find difficulty in making an estimate.

27. Plans of arboricultural operations have been received for the following districts. These plans have been carried out as far as possible :—

Hissar 1916-18, Rohtak 1916-17 to 1918-19, Gurgaon 1915-16 to 1917-18, Karnal 1913-14 to 1915-16, Ambala 1916-17 to 1917-18, Kangra 1916-17 to 1918-19, Hoshiarpur 1917-18 to 1919-20, Ferozepore 1915-16 to 1917-18, Lahore 1912-17, Attock 1915-16 to 1916-17, Muzaffargarh 1913-14 to 1915-16, Jullundur 1912-21 and Ludhiana 1915-16 to 1919-20.

28. The revenue from all sources was Rs. 15,41,656 and the total expenditure amounted to Rs. 24,83,983, showing a deficit of Rs. 9,42,327 for the triennial period or an average of Rs. 3,14,109 per annum. In the previous period revenue was Rs. 14,47,812, the expenditure Rs. 22,58,770 and the deficit Rs. 8,10,958.

The deficit for the triennial period under report is made up as follows :—

	Rs.
Districts	3,39,441
Canal Department	4,54,038
Provincial Divisions	1,48,848

29. Arboriculture thus costs the Province Rs. 3,14,100 annually. Against this must be set off the capital value of the avenues and plantations which have been created and of which a considerable proportion has not yet reached maturity. This capital value as far as can be ascertained from the incomplete returns received amounts to Rs. 1,50,63,449.

30. Two diagrams accompany this report showing the position of each canal, Provincial Division and district with regard to the length of canal or road suitable for avenue planting, the length actually planted to date and the length still remaining to be planted up. Out of a total length of 12,330 miles of canal 6,703 miles have been planted and 5,627 miles remain to be taken in hand. In the case of roads 10,098 miles have been planted and 6,091 miles remain to be taken up.

R. McINTOSH,

Conservator of Forests, Punjab.

* Figures given in last report were incorrect.

Statement showing Valuation of Standing Timber in each District.

No.	Name of District.						Value.
							Rs.
1	Ambala	...	...	...	...	...	8,25,245
2	Hoshiarpur	...	...	...	...	...	14,63,489
3	Gurdaspur	...	...	...	...	...	10,76,000
4	Sialkot	...	...	...	...	...	36,98,472
5	Sialkot Municipality	...	...	...	...	...	15,180
6	Gujrat	...	...	...	...	...	13,09,971
7	Gujrat Municipality	...	...	...	...	...	28,852
8	Karnal	...	...	...	...	...	3,14,231
9	Ludhiana	...	...	...	...	...	1,29,251
10	Ferozepore	...	...	...	...	...	3,39,425
11	Jhang	...	...	...	...	...	64,500
12	Jhang Municipality	...	...	...	...	...	38,829
13	Chiniot Municipality	...	...	...	...	...	1,400
14	Jullundur	...	...	...	...	...	3,16,398
15	Montgomery	...	...	...	...	...	40,000
16	Lyallpur	...	...	...	...	...	2,72,350
17	Lahore	...	...	...	...	...	2,04,800
18	Lahore Municipality	...	...	...	...	...	75,000
19	Amritsar	...	...	...	...	...	3,23,172
20	Amritsar Municipality	...	...	...	...	...	93,908
21	Gujranwala	...	...	...	...	...	2,90,812
22	Gujranwala Municipality	...	...	...	...	...	98,623
23	Shahpur	...	...	...	...	...	10,30,600
24	Rohtak	...	...	...	...	...	50,599
25	Gurgaon	...	...	...	...	...	1,08,401
26	Hissar	...	...	...	...	...	1,20,319
27	Hissar Municipality	...	...	...	...	...	13,597
28	Jhelum	...	...	...	...	...	1,93,245
29	Mianwali	...	...	...	...	...	77,249
30	Muzaffargarh	...	...	...	...	...	4,41,000
					Total	...	1,25,54,919

Note.—Information not received from six districts.

Statement showing Value of Timber and Firewood in each Division of Canal Department.

No.	Name of Division.	Value of standing timber.	Value of firewood.
		Rs.	Rs.
1	Upper Bari Doab Canal, I Division	3,27,650	55,657
2	Ditto II do.	5,61,650	89,811
3	Ditto III do.	2,18,919	52,920
4	Ditto IV do.	1,29,482	78,422
5	Multan Canals Division	4,53,332	...
6	Dera Ghazi Khan Canals Division	2,26,786	...
7	Muzaffargarh Canals Division	3,61,228	...
8	Lower Sutlej Inundation Canals Division	42,756	...
9	Western Jumna Canal, Karnal do.	1,30,706	...
10	Ditto Delhi do.	3,06,975	...
11	Ditto Hissar do.	1,54,997	...
12	Ditto Rohtak do.	1,40,972	...
13	Sirhind Canal, Ferozepore Division	74,294	1,70,856
14	Ditto Ludhiana do.	12,65,600	...
15	Ditto Patiala do.	3,02,200	1,800
16	Ditto Bhatinda do.	3,89,052	...
17	Ditto Rupar do.	3,19,366	1,11,778
18	Upper Chenab Canal, Marala Division	43,995	...
19	Lower Chenab Canal, Lower Gugera Division	15,408	67,037
20	Ditto Upper Gugera Division	17,701	...
21	Ditto Jhang Division	5,00,000	4,00,000
22	Ditto Burala do.	24,903	...
23	Lower Jhelum Canal, Rasul do.	1,42,780	1,01,430
24	Ditto Shahpur do.	55,740	...
25	Ditto Sargodha do.	7,61,222	73,995
26	Ditto Kirana do.	78,000	1,73,200
	Total	70,45,714	13,76,976

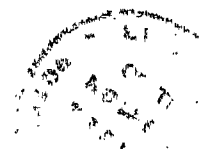
NOTE.—Information not received from 17 divisions.

Provincial Divisions (Public Works Department).

No.	Name of Division.	Value of standing timber.
		Rs.
1	Kangra	1,86,000
2	Lahore, No. I	1,20,498
3	Lahore, No. II	2,92,500
4	Jullundur	1,73,152
5	Lyallpur	84,130
6	Multan	78,734
7	Ambala	1,35,400
8	Gurgaon	61,745
	Total	11,31,554

NOTE.—Information not received from three divisions.

STATEMENTS.



STATEMENT No. I (a).

PROGRESS STATEMENT OF NURSERIES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3					4					5	6
District or Division.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at the end of the triennial period.	REMARKS
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
HILLS AND SUB-MONTANE DISTRICTS WITH GOOD RAINFALL.													
Simla	3.27	...	...	...	...	...	...	...	(a) 3.27	...	3.27	...	(a) Mahasu abolished, Government No. 1216-S dated 30th Jan.
Ambala	2.23	...	2.73	...	...	2.73	...	0.01	0.04	0.35	0.40	4.56	(b) Due to sand.
Kangra	10.59	...	0.62	...	...	0.62	7.76	...	...	0.04	7.80	3.41	(c) To groves.
Hoshiarpur	2.60	...	...	...	...	...	...	...	...	...	...	2.60	(d) Nursery abolished.
Gurdaspur	8.81	...	1.89	...	...	1.89	...	...	...	0.37	0.37	9.83	(e) Transferred to milat land.
Sialkot	24.13	...	4.63	...	...	4.63	6.32	...	...	11.66	17.98	10.78	(f) Seed not given for want of rain.
Sialkot Municipality	0.08	...	...	...	...	...	...	...	...	...	...	0.08	(g) Transferred to groves.
Gujrat	4.72	...	0.85	...	...	0.85	...	0.70	...	1.65	2.35	3.22	(h) Due to scarcity of water.
Rawalpindi	2.15	...	0.69	0.09	...	0.78	...	1.43	...	0.16	1.59	1.34	(i) Washed away.
Rawalpindi Municipality	2.10	...	0.10	...	...	0.10	...	...	2.00	...	2.00	0.20	
Total	60.18	...	11.51	0.09	...	11.60	14.08	2.14	2.04	17.50	35.76	36.02	
PLAINS DISTRICTS WITH GOOD IRRIGATION FACILITIES.													
Karnal	2.27	...	1.13	...	...	1.13	...	...	...	...	...	3.40	
Ludhiana	4.14	...	0.75	...	...	0.75	...	0.23	...	...	0.23	4.66	(j) Due to bad season.
Perozepore	0.50	...	...	...	...	...	...	...	...	...	...	0.50	(k) To avenues.
Jhang	1.89	...	1.25	...	...	1.25	...	1.87	0.02	1.89	1.25	1.25	
Jhang Municipality	0.01	...	0.01	...	...	0.01	...	...	...	...	...	0.02	
Jullundur	6.64	...	...	...	...	...	...	1.25	...	...	1.25	5.39	
Montgomery	1.03	...	1.26	...	...	1.26	...	...	...	1.53	1.53	0.75	(l) Eaten up by cattle.
Lyallpur	...	...	2.05	...	...	2.05	...	...	...	...	...	2.05	
Labore	13.47	...	3.82	...	...	3.82	...	...	...	...	...	17.29	(m) Transferred to other districts.
Labore Municipality	2.19	...	0.13	...	...	0.13	...	...	...	...	...	2.32	
Amritsar	5.76	...	2.26	...	...	2.26	3.69	0.18	0.66	0.32	4.85	3.17	
Amritsar Municipality	7.34	...	0.10	...	...	0.10	...	...	3.11	...	3.11	4.33	(n) Cultivated for reforestation purposes.
Gujranwala	4.94	...	5.84	...	...	5.84	...	1.08	2.12	5.23	8.44	2.34	
Shahpur	1,074.90	...	...	...	...	...	...	...	...	15.00	15.00	1,059.90	
Shahpur Municipality	...	8.00	...	...	...	8.00	...	...	...	...	...	8.00	
Rohtak	5.11	...	0.33	...	...	0.33	...	...	...	...	...	5.49	
Total	1,130.18	8.00	18.98	...	...	26.98	3.69	1.50	9.01	22.10	36.80	1,120.86	
PLAINS DISTRICTS WITH SLIGHT OR NO IRRIGATION FACILITIES.													
Gurgaon	1.24	...	1.94	...	...	1.94	...	...	...	0.26	0.26	2.92	(o) Due to removal of plants.
Fissar	128.85	...	0.36	...	...	0.36	...	...	0.26	0.08	0.34	128.87	
Fissar Municipality	...	...	0.39	...	...	0.39	...	...	...	...	...	0.39	
Jhelum	0.48	...	0.67	...	...	0.67	...	...	0.20	...	0.20	0.95	
Attock	1.45	...	...	...	...	...	...	...	0.16	0.53	0.69	0.76	
Attock Municipality	0.01	...	...	...	...	...	...	...	0.01	...	0.01	...	(p) Transferred to Hazro Municipal den.
Mianwali	2.35	...	1.00	0.72	...	1.72	...	...	...	0.06	0.06	4.01	
Multan	0.37	...	0.73	...	...	0.73	...	0.10	...	0.23	0.33	0.72	
Multan Municipality	0.43	...	...	...	...	...	...	...	...	0.43	0.43	...	
Muzaffargarh	1.07	...	2.21	...	...	2.21	...	0.01	...	1.22	1.23	2.05	
Dera Ghazi Khan	0.19	...	...	...	...	...	...	...	...	...	...	0.19	
Dera Ghazi Khan Municipality	...	...	0.22	...	...	0.22	...	...	...	...	...	0.22	
Total	136.44	...	7.52	0.72	...	8.24	...	0.11	0.63	2.86	3.60	141.08	
Total for 1914-15 to 1916-17	1,326.80	8.00	38.01	0.81	...	46.82	17.77	3.75	11.68	42.46	75.66	1,297.96	
Total for 1911-12 to 1913-14	278.16	0.50	58.57	1.063.42	...	1,122.49	0.53	12.8	40.65	20.19	73.85	1,326.80	

STATEMENT No. I (b).

PROGRESS STATEMENT OF NURSERIES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD, 1914-15 TO 1916-17.

1	2	3					4					5	6
District or Division.	Area under nurseries at the beginning of the triennial period.	ADDITION DURING THE PERIOD.					DEDUCTION DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Upper Bari Doab Canal, 2nd Division.	...	...	7.27	...	...	7.27	...	...	...	...	...	7.27	(a) Transferred from plantation.
Upper Bari Doab Canal, 3rd Division.	...	...	...	(a)	...	0.46	...	...	...	(b)	0.08	0.38	(b) Transferred to avenues.
Lower Bari Doab Canal, Balloki Division.	...	...	0.38	...	...	0.03	...	...	...	...	...	0.03	
Lower Bari Doab Canal, Okara Division.	0.02	...	3.49	(c)	...	3.64	...	(d)	(e)	(b)	1.70	1.96	(c) Transferred from Montgomery Division.
Lower Bari Doab Canal, Montgomery Division.	1.18	...	0.80	...	...	0.80	...	(f)	(e)	(g)	1.28	0.70	(d) Due to hot weather.
Multan Canal Division.	6.95	...	0.65	...	...	0.65	...	(h)	(e)	(b)	7.43	0.17	(e) Transferred to plantation.
Dera Ghazi Khan Division, Indus Canal.	5.46	...	0.46	...	...	0.46	...	(i)	(e)	(b)	5.12	0.80	(f) Due to bad soil and want of water.
Muzaffargarh Canal Division.	0.13	...	0.07	...	...	0.07	...	...	...	(b)	0.03	0.17	(g) 0.15 transferred to Okara Division.
Lower Sutlej Inundation Canals Division.	0.68	...	...	...	...	...	...	...	(e)	(b)	0.08	0.60	(h) Due to reh-soil.
Western Jumna Canal, Karnal Division.	0.10	...	...	...	...	...	...	...	...	...	...	0.10	(i) Eroded by river.
Western Jumna Canal, Delhi Division.	0.50	...	0.18	...	...	0.18	...	...	...	...	...	0.68	
Western Jumna Canal, Hissar Division.	2.23	...	...	(j)	...	0.50	2.73	...	...	...	2.73	...	(j) Transferred from Rohtak Division.
Western Jumna Canal, Rohtak Division.	0.50	0.13	0.50	...	...	0.63	...	...	(e)	(k)	1.13	...	(k) 0.50 transferred to Hissar Division.
Sirhind Canal, Ferozepore Division.	0.11	...	0.05	...	...	0.05	...	...	0.11	...	0.11	0.05	0.13 removed being too old.
Upper Chenab Canal, Marala Division.	...	...	0.14	(l)	...	0.44	...	...	...	...	...	0.44	(l) Transferred from Gujranwala Division.
Upper Chenab Canal, Gujranwala Division.	0.30	...	...	0.01	...	0.01	...	...	(e)	(m)	0.31	...	(m) Transferred to Marala Division.
Upper Chenab Canal, Sheikhupura Division.	0.11	...	...	...	...	...	...	...	(n)	(o)	0.11	...	(n) Transplanted round Chichoki Mallian I. H. garden.
Upper Jhelum Canal, Jhelum Division.	0.23	...	...	...	...	...	...	...	...	...	...	0.23	(o) Transferred to Gujranwala Division.
Upper Jhelum Canal, Phalia Division.	2.00	...	0.20	...	...	0.20	...	(p)	(e)	...	2.00	0.20	(p) Scarcity of rain.
Upper Jhelum Canal, Gujrat Division.	0.04	...	0.01	...	...	0.01	...	...	...	(b)	0.05	...	
Lower Jhelum Canal, Rasul Division.	1.25	...	...	...	...	...	...	...	...	...	...	1.25	
Lower Jhelum Canal, Sargodha Division.	6.26	...	...	...	...	...	...	...	...	...	...	6.26	
Total for 1914-15 to 1916-17.	28.05	0.13	13.85	1.42	...	15.40	2.73	5.33	4.06	10.04	22.16	21.29	
Total for 1911-12 to 1913-14.	74.86	...	42.26	1.74	0.34	44.34	10.42	5.62	61.06	4.05	91.15	28.05	

STATEMENT No. I (c).

PROGRESS STATEMENT OF NURSERIES IN THE PROVINCIAL DIVISIONS
FOR THE TRIENNIAL PERIOD 1914-1915 TO 1916-1917.

1	2	3					4					5	6
District or Division.	Area under nurseries at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Area remaining at end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Extension of nurseries.	Transfers from other heads.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfer to groves, plantations or gardens.	Other causes.	Total deductions.		
	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	Acre and decim.	
Rawalpindi Division	3.65	...	0.58	...	...	0.58	...	(a) 0.31	...	(b) 0.33	0.64	3.59	(a) 0.27 due to drought and bad soil, 0.04 eaten up by Military camels. (b) To avenues. (c) To groves. (d) To plantations.
Kangra Division ...	2.38	0.09	0.08	...	...	0.17	...	...	(c) 0.03	...	0.03	2.52	(e) 0.93 to avenues, 0.06 cleared. (f) Transferred to Jullundur Provincial Division.
Lahore Division, No. I.	0.76	...	1.42	...	...	1.42	...	...	...	...	...	2.18	
Lahore Division, No. II.	1.74	0.65	0.45	...	...	1.10	...	...	(d) 0.83	(b) 0.23	1.06	1.78	
Jullundur Division	0.89	...	2.23	...	0.67	2.90	...	...	...	(e) 0.99	0.99	2.80	
Lyallpur Division...	1.12	...	0.92	...	...	0.92	...	...	(d) 0.29	...	0.29	1.75	
Multan Division ...	...	...	0.10	...	...	0.10	...	...	...	...	...	0.10	
Ambala Division ...	2.10	...	6.88	...	...	6.88	...	...	(d) 1.53	(f) 0.67	2.20	6.78	
Gurgaon Division ...	2.27	...	0.80	...	...	0.80	...	...	...	...	...	3.07	
Total for 1914-15 to 1916-17.	14.91	0.74	13.46	...	0.67	14.87	...	0.31	2.68	2.22	5.21	24.57	
Total for 1911-12 to 1913-14.	30.95	...	7.55	...	4.77	12.32	0.09	1.75	19.58	6.67	28.09	15.18	

STATEMENT No. II (a).

• PROGRESS STATEMENT OF PLANTATIONS IN THE DISTRICTS FOR THE
TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4						5						6	7
District or Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves, or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
			Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.		
HILL AND SUB-MONTANE DISTRICTS WITH GOOD RAINFALL.																
Simla	59'00	59'00	...	...	...	...	...	...	...	...	...	...	(a) 59'00	59'00	...	
Kangra	57'78	57'78	...	...	...	...	...	...	...	...	...	...	...	...	57'78	
Sialkot	9'80	9'80	...	2'25	...	...	...	2'25	...	...	...	...	...	...	12'05	
Rawalpindi Municipality.	...	0'50	...	0'50	...	...	...	0'50	...	...	...	...	...	...	1'00	
Total	126'58	127'08	...	2'75	...	...	...	2'75	...	...	...	...	59'00	59'00	70'33	
PLAINS DISTRICTS WITH GOOD IRRIGATION FACILITIES.																
Ferozepore	423'00	312'50	...	25'00	...	...	...	25'00	...	(b) 10'00	...	...	...	10'00	327'50	
Jhang Municipality.	1'29	1'29	...	...	...	...	...	...	...	(c) 0'07	...	...	(d) 0'38	0'45	0'84	
Jullundur	80'62	80'62	...	...	...	...	...	...	...	...	...	...	(e) 18'30	18'30	62'32	
Lahore Municipality.	4'55	1'13	3'42	0'19	...	...	...	3'61	...	...	...	...	...	...	4'74	
Amritsar	0'74	1'47	...	0'70	...	...	...	0'70	...	(f) 0'70	...	...	...	0'70	1'47	
Gujranwala	62'25	62'25	...	2'00	(g) 2'12	...	...	4'12	2'50	...	...	...	...	2'50	63'87	
Total	572'45	459'26	3'42	27'89	2'12	...	...	33'43	2'50	10'77	...	...	18'68	31'95	460'74	
PLAINS DISTRICTS WITH SLIGHT OR NO IRRIGATION FACILITIES.																
Gurgaon	2,302'72	44'31	...	...	...	...	...	...	...	...	...	...	...	...	44'31	
Hissar	138'48	83'23	...	...	(g) 0'26	...	...	0'26	...	...	...	...	...	...	83'49	
Jhelum	...	...	...	...	(g) 0'20	...	...	0'20	...	...	(h) 0'09	...	...	0'09	0'11	
Attock	...	5'50	...	...	...	...	...	...	...	...	...	...	...	...	5'50	
Mianwali	341'49	341'49	...	...	...	(i) 164'21	...	164'21	...	...	...	...	...	...	505'70	
Dera Ghazi Khan Municipality.	...	0'18	...	...	...	...	...	...	...	...	...	...	...	...	0'18	
Total	2,782'69	475'21	...	...	0'46	164'21	...	164'67	...	...	0'09	...	...	0'09	639'79	
Total for 1914-15 to 1916-17.	3,481'72	1,061'55	3'42	30'64	2'58	164'21	...	200'85	2'50	10'77	0'09	...	77'68	91'04	1,171'86	
Total for 1911-12 to 1913-14.	3,326'46	1,811'84	204'25	24'72	6'68	...	...	235'65	...	16'15	...	950'73	...	966'88	1,080'61	

(a) Mahasu orchards abolished, vide Punjab Government No. 1216-S. (Rev.) dated 30th June 1914.

(b) Due to insufficient water and frost.

(c) Due to sandy soil.

(d) Private property.

(e) 7'30 acres sold and 11'00 acres given on lease.

(f) Due to want of water and bad soil.

(g) Transferred from nurseries.

(h) Transferred to avenues.

(i) Transferred from a new reserved forest at Mianwali.

STATEMENT No. II (b).

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4						5						6	7
District or Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	Acre and decimals.	
Upper Bari Doab Canal, 1st Division.	1,316.84	1,316.84	...	...	...	...	...	...	...	...	...	...	...	...	1,316.84	
Upper Bari Doab Canal, 2nd Division.	1,728.29	1,728.29	...	156.67	...	...	...	156.67	...	...	...	...	(a) 1.84	1.84	1,883.12	
Upper Bari Doab Canal, 3rd Division.	1,480.69	1,453.52	...	40.95	...	...	...	40.95	159.42	(b) 28.72	(c) 0.46	...	...	188.60	1,305.87	
Upper Bari Doab Canal, 4th Division.	2,169.76	1,824.09	...	100.31	...	...	...	100.31	...	...	...	...	...	...	1,924.40	
Upper Sutlej Division, Inundation Canals.	323.83	323.83	...	...	...	...	...	...	...	...	...	...	...	...	323.83	
Central Workshop Division.	...	0.50	...	...	...	...	...	...	...	...	...	...	(d) 0.50	0.50	...	
Lower Bari Doab Canal, Balloki Division.	93.00	...	...	68.96	...	(e) 320.94	...	389.90	...	(f) 63.20	...	...	...	63.20	326.70	
Lower Bari Doab Canal, Okara Division.	643.36	250.61	242.63	465.09	(g) 1.20	(h) 323.70	...	1,032.62	70.34	(f) 295.54	...	(i) 320.94	...	686.82	596.41	
Lower Bari Doab Canal, Montgomery Division.	279.62	59.65	...	982.07	(g) 0.10	...	...	982.17	...	(b) 503.51	...	(j) 323.70	...	827.21	314.61	
Lower Bari Doab Canal, Khanewal Division.	100.55	6.00	...	100.55	...	...	...	100.55	6.00	...	...	...	...	6.00	100.55	
Multan Canals Division.	183.25	176.66	6.14	...	(g) 0.91	...	...	7.05	...	...	...	...	...	...	183.71	
Dera Ghazi Khan Division, Indus Canals.	25.07	25.07	4.50	3.00	(g) 0.10	...	(k) 0.30	7.90	...	(l) 0.50	(m) 0.50	...	(n) 0.20	1.20	31.77	
Muzaffargarh Canals Division.	21.04	21.04	...	0.19	...	...	...	0.19	...	(b) 0.14	...	...	(o) 1.56	1.70	19.63	
Lower Sutlej Inundation Canals Division.	28.58	28.58	...	...	30.0	...	...	(g) 0.08	...	...	...	...	...	...	28.61	
Western Jumna Canal, Karnal Division.	946.13	717.12	1.20	52.60	...	...	...	53.80	271.66	...	...	...	...	271.66	499.26	
Western Jumna Canal, Delhi Division.	740.87	471.92	100.50	61.90	...	...	...	162.40	...	...	...	...	...	...	634.32	
Western Jumna Canal, Hissar Division.	707.51	707.94	...	22.23	...	(p) 94.60	...	116.83	...	(q) 20.00	...	(r) 263.84	...	263.84	608.93	
Western Jumna Canal, Rohtak Division.	514.77	145.34	10.45	7.00	(g) 0.50	(s) 263.84	...	281.79	...	...	...	(t) 94.60	(u) 4.00	98.60	328.63	
Sirhind Canal, Ferozepore Division.	2,850.28	2,322.65	...	2.75	(g) 1.38	...	...	4.13	191.08	...	...	(v) 542.58	...	733.66	1,593.12	
Sirhind Canal, Ludhiana Division.	1,731.11	3,296.24	132.70	91.70	...	(w) 542.58	...	766.98	108.20	...	...	(x) 1,911.30	...	2,019.50	2,043.72	
Sirhind Canal, Patiala Division.	3,925.85	2,762.13	...	...	...	...	...	...	...	...	...	...	...	...	2,762.13	
Sirhind Canal, Bhatinda Division.	2,087.00	1,304.45	...	126.94	...	...	...	126.94	25.87	(y) 43.16	...	...	...	69.03	1,362.36	
Sirhind Canal, Rupar Division.	2,321.80	...	...	...	...	(z) 1,911.30	...	1,911.30	...	...	...	...	...	...	1,911.30	
Upper Chenab Canal, Marala Division.	26.40	...	...	29.41	...	(1) 193.52	...	222.93	...	(2) 30.80	...	...	(3) 1.16	31.96	190.97	
Upper Chenab Canal, Gujranwala Division.	43.77	365.16	4.74	65.54	0.01	(4) 34.85	...	105.14	21.00	(2) 35.40	...	(5) 193.52	...	249.92	220.38	
Upper Chenab Canal, Sheikhupura Division.	187.36	63.07	...	37.44	...	...	...	37.44	2.93	(2) 21.45	...	(6) 34.85	...	59.23	41.28	
Carried over ...	24,476.63	19,438.70	502.86	2,415.30	4.23	3,685.33	0.30	6,808.02	856.50	1,042.42	0.96	3,685.33	9.26	5,504.47	20,452.25	

STATEMENT No. II (b)—concluded.

PROGRESS STATEMENT OF PLANTATIONS IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4							5						6	7
District or Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at beginning of the period.	ADDITIONS DURING THE PERIOD.							DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	REMARKS.
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.			
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Right forward	24,478.93	19,438.70	502.86	2,415.30	4.23	3,685.33	0.30	6,608.02	856.50	1,042.42	0.96	3,685.33	9.26	5,594.47	20,452.25		
Chenab Canal, Raya Division.	211.90	85.48	...	69.48	...	...	...	69.48	31.32	(5) 29.85	(m) 1.20	...	...	62.37	92.59		
Chenab Canal, Khanki Division.	1,625.20	1,272.37	...	0.34	...	...	...	0.34	...	...	...	(7) 263.12	(8) 8.56	271.68	1,001.03		
Chenab Canal, Hafizabad Division.	263.12	...	...	...	...	(9) 263.12	...	263.12	...	...	...	...	...	...	263.12		
Chenab Canal, Lyallpur Division.	951.41	951.41	0.91	18.28	...	...	...	19.19	...	...	...	...	(10) 44.31	44.31	926.29		
Chenab Canal, Lower Juggera Division.	636.68	625.27	...	42.24	...	...	...	42.24	...	(11) 56.72	...	...	(12) 7.94	64.66	602.85		
Chenab Canal, Upper Juggera Division.	970.28	970.28	78.24	0.70	...	...	...	78.94	...	...	...	...	...	...	1,049.22		
Chenab Canal, Jhang Division.	649.86	566.39	7.50	20.31	...	...	...	27.81	...	(b) 2.06	...	...	...	2.06	592.14		
Chenab Canal, Barala Division.	784.03	673.12	...	7.13	...	...	...	7.13	...	...	...	...	...	...	680.25		
Jhelum Canal, Mangla Division.	1.04	...	...	1.04	...	...	...	1.04	...	...	...	...	...	...	1.04		
Jhelum Canal, Jhelum Division.	1,008.33	588.85	42.59	307.78	...	(13) 25.23	...	375.60	...	(14) 45.58	...	...	...	45.58	918.87		
Jhelum Canal, Phalia Division.	71.56	3.79	15.68	60.03	(g) 1.00	...	...	76.71	...	(9) 47.93	...	(15) 25.23	...	73.16	7.34		
Jhelum Canal, Gujrat Division.	125.57	127.59	...	242.53	...	...	...	242.53	...	(16) 203.69	...	...	...	203.69	166.23		
Jhelum Canal, Rasul Division.	593.16	352.63	...	...	...	...	...	...	...	...	...	(17) 12.25	...	12.25	340.38		
Jhelum Canal, Sargodha Division.	0.62	282.96	...	0.62	...	(18) 980.80	...	981.42	...	(u) 10.20	(m) 1.50	(19) 173.13	...	184.63	1,079.55		
Jhelum Canal, Kirana Division.	1,072.93	1,009.43	...	163.32	...	(20) 173.13	...	336.45	...	(21) 24.82	...	(22) 1,147.93	...	1,172.75	173.13		
Jhelum Canal, Shahpur Division.	...	...	...	...	...	(23) 179.38	...	179.38	...	...	...	...	...	...	179.38		
Total for 1914-15 to 1916-17.	33,442.61	26,948.27	647.78	3,349.10	5.23	5,306.99	0.30	9,309.40	887.82	1,463.47	3.66	5,306.99	70.07	7,732.01	28,525.66		
Total for 1911-12 to 1913-14.	33,972.55	25,542.75	218.92	3,161.44	621.05	2,147.53	16.57	6,165.51	542.99	1,272.04	10.65	2,610.46	323.85	4,759.99	26,948.27		

(a) Disforested for work done to silting back left bank.

(b) Due to bad soil.

(c) Transferred to nurseries.

(d) No plantation exists.

(e) Transferred from Okara Division.

(f) Due to sandy and Kallar soil.

(g) Transferred from nursery.

(h) Transferred from Montgomery Division.

(i) Transferred to Balloki Division.

(j) Transferred to Okara Division.

(k) Fruit trees purchased from Zamindars.

(l) Due to bad water.

(m) To avenues.

(n) Died in sub-soil water.

(o) 0.72 land abandoned.

(p) 0.17 land cleared for camping purposes.

(q) 0.67 used for filling up gaps.

(r) Transferred from Rohtak Division.

(s) Scarcity of rain.

(t) Transferred to Rohtak Division.

(u) Transferred from Hissar Division.

(v) Transferred to Hissar Division.

(w) Sold.

(x) Transferred to Ludhiana Division.

(y) Transferred from Ferozepore Division.

(z) Transferred to Rupar Division.

(aa) Due to want of fencing.

(ab) Transferred from Ludhiana Division.

(1) Transferred from Gujranwala Division.

(2) 9.4 due to soil 21.4 due to absence of rain.

(3) Due to cutting of spoil plantation.

(4) Transferred from Sheikhupura Division.

(5) Transferred to Marala Division.

(6) Transferred to Gujranwala Division.

(7) Transferred to Hafizabad Division.

(8) Due to setting back banks.

(9) Transferred from Khanki Division.

(10) Utilized in 20.9 silting tanks. 23.41 cut down.

(11) 50.68 acres due to poor command and bad soil. 6.04 acres due to destruction by cattle of Janglis.

(12) Silting tank.

(13) Transferred from Phalia Division.

(14) Eaten by white ants.

(15) Transferred to Jhelum Division.

(16) 158.69 due to scarcity of rain.

(17) 45.20 due to heavy rains.

(18) Transferred to Shahpur Division.

(19) Transferred from Kirana Division.

(20) Transferred to Kirana Division.

(21) Transferred from Sargodha Division.

(22) Due to bad soil and heavy rain.

(23) 167.13 to Shahpur Division. 980.80 to Sargodha Division.

(24) 12.25 transferred from Rasul Division.

(25) 167.13 transferred from Kirana Division.

STATEMENT No. II (c).

PROGRESS STATEMENT OF PLANTATIONS IN THE PROVINCIAL DIVISIONS
FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4							5						6
District or Division.	Area taken up for plantation at the beginning of the triennial period.	Area successfully stocked at the beginning of the period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked at the end of the triennial period.	
			Corrections of areas as recorded.	Successfully sown or planted.	Transfers from nurseries, groves or gardens.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	
Rawalpindi Division.	2.25	2.25	...	...	...	...	...	...	...	...	...	...	...	...	2.25	
Lahore Division, No. I.	...	15.20	...	0.50	...	...	...	0.50	...	...	...	...	...	...	15.70	
Lahore Division, No. II.	...	6.34	...	...	(a) 0.83	...	...	0.83	4.45	...	...	...	...	4.45	2.72	
Jullundur Division.	...	0.12	...	0.30	...	(b) 2.31	...	2.61	0.12	...	...	...	...	0.12	2.61	
Lyallpur Division	...	...	...	...	(c) 190.45	...	...	190.45	...	...	...	...	...	...	190.45	
Multan Division	...	7.27	...	...	...	...	...	...	...	...	...	...	...	...	7.27	
Ambala Division	3.15	4.02	...	...	(a) 1.53	...	...	1.53	...	...	...	(d) 2.31	...	2.31	3.24	
Total for 1914-15 to 1916-17.	5.40	35.20	...	0.80	192.81	2.31	...	195.92	4.57	...	...	2.31	...	6.88	224.24	
Total for 1911-12 to 1913-14.	2.45	26.29	6.34	0.43	2.14	...	...	8.91	...	...	...	...	...	...	35.20	

(a) Transferred from nursery.

(b) Transferred from Ambala Provincial Division.

(c) Transferred from nurseries and groves.

(d) Transferred to Jullundur Provincial Division.

STATEMENT No. III (a)

PROGRESS STATEMENT OF GROVES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3						4						5	6
District or Division.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
		Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.	Acres and decimals.		
HILL AND SUBMONTANE DISTRICTS WITH GOOD RAINFALL.															
Ambala ...	37'02	...	...	(a) 0'04	...	...	0'04	...	...	...	...	...	(b) ...	...	37'06
Kangra ...	14'05	...	...	...	...	...	...	...	...	...	...	...	0'50	0'50	13'55
Hoshiarpur ...	23'47	...	...	...	...	...	...	...	...	...	...	...	6'13	6'13	17'34
Gurdaspur ...	15'76	...	...	...	...	...	...	...	...	...	...	...	...	...	15'76
Sialkot ...	0'89	...	...	...	...	...	...	...	...	...	...	...	...	...	0'89
Gujrat ...	138'39	...	...	...	...	...	...	...	...	...	...	...	7'80	2'00	128'59
Gujrat Municipality ...	1'80	...	...	...	...	...	...	...	...	...	...	...	...	...	1'80
Rawalpindi ...	139'96	...	...	...	...	...	...	...	...	...	...	...	0'09	0'09	139'87
Rawalpindi Municipality ...	13'21	...	...	(a) 2'00	...	...	2'00	...	...	...	...	...	(f) 6'71	6'71	8'50
Total ...	384'55	...	...	2'04	...	...	2'04	...	...	0'09	13'93	9'21	23'23	363'36	
PLAINS DISTRICTS WITH GOOD IRRIGATION FACILITIES.															
Karnal ...	368'66	...	18'08	...	...	...	18'08	...	...	...	...	...	...	...	368'74
Ludhiana ...	165'30	...	...	...	...	...	...	...	...	...	...	...	...	...	165'30
Ferozepore ...	393'54	...	...	...	...	...	...	...	...	...	...	...	...	...	393'54
Jhang ...	21'75	...	...	(a) 1'87	...	...	1'87	...	...	...	...	...	...	...	23'62
Jhang Municipality ...	11'84	...	...	...	...	...	...	...	...	...	...	...	...	...	11'84
Chiniot Municipality ...	0'75	...	...	...	...	...	...	...	...	...	...	...	...	...	0'75
Jullundur ...	30'32	...	...	(a) 1'25	C.	...	1'25	...	...	...	...	...	(b) 0'66	0'66	30'91
Montgomery ...	746'00	...	...	...	...	...	...	...	...	...	...	...	(c) 746'00	746'00	...
Lyallpur ...	39'00	...	...	...	...	...	...	...	...	...	...	...	(d) 22'50	22'50	16'50
Lahore ...	16'73	...	...	...	...	...	...	...	...	...	...	...	(e) 16'73	16'73	...
Amritsar ...	66'10	...	6'15	(a) 0'66	...	2'12	8'93	...	(f) 1'21	...	...	...	(g) 3'64	4'85	70'18
Amritsar Municipality ...	1'75	...	...	(c) 3'11	...	...	3'11	...	...	...	...	...	(h) 52'60	52'60	4'86
Shahpur ...	1,100'55	144'39	...	...	...	...	144'39	...	...	...	...	...	(i) 52'60	8'00	1,184'44
Shahpur Municipality ...	...	...	...	...	...	...	52'50	...	...	...	...	...	...	...	52'50
Rohtak ...	544'08	...	...	...	...	...	...	...	...	...	...	...	...	...	544'08
Total ...	3,506'37	144'39	24'23	6'39	52'50	2'12	230'13	...	1'21	...	52'50	780'80	834'51	2,901'99	
PLAINS DISTRICTS WITH SLIGHT OR NO IRRIGATION FACILITIES.															
Gurgaon ...	282'86	...	...	...	...	...	...	...	...	...	...	...	...	...	282'86
Hissar ...	321'74	...	...	...	...	...	...	...	...	...	...	...	...	...	321'74
Hissar Municipality ...	8'42	...	3'92	...	...	...	3'92	...	...	...	...	...	...	...	12'34
Jhelum ...	16'38	...	...	...	...	...	...	...	...	...	...	...	...	...	16'38
Attock ...	19'07	...	...	(a) 0'16	...	...	0'16	...	...	...	...	...	...	...	19'23
Attock Municipality ...	4'23	...	...	...	...	...	...	...	...	...	...	...	...	...	4'23
Mianwali ...	50'33	...	2'66	...	...	...	2'66	...	...	...	...	...	...	0'72	52'27
Multan ...	0'60	...	...	...	...	...	...	...	...	...	...	...	...	...	0'50
Muzaffargarh ...	278'07	...	...	...	...	(o) 19'25	19'25	...	(p) 1'50	...	(q) 35'53	22'75	59'78	237'54	
Total ...	981'80	...	6'58	0'16	...	19'25	25'99	...	1'50	0'72	35'53	22'75	60'50	947'09	
Total for 1914-15 to 1916-17...	4,872'52	144'39	30'81	9'09	52'50	21'37	258'16	...	2'71	0'81	101'96	812'76	918'24	4,212'44	
Total for 1911-12 to 1913-14...	4,877'09	4'75	30'73	31'01	119'49	2'04	188'02	12'04	35'96	...	57'44	76'19	181'63	4,883'48	

(a) Transferred from nurseries.

(b) Given on lease.

(c) Re-transferred to Jail Department.

(d) Transferred to the Moslem Zamindara Association for construction of a Zamindara School.

(e) Transferred to nurseries.

(f) Cleared and lawn made therein.

(g) Sold to owners of land.

(h) 9'50 acres used for building school and dispensary, 13'00 acres given on lease.

(i) Spontaneous growth.

(j) Due to bad planting.

(k) Removal of dry and useless trees.

(l) Transferred to Shahpur Municipality.

(m) Given in exchange for Government purposes.

(n) Transferred from Shahpur District Board.

(o) Due to addition of Arabian date plantation along with Talari garden.

(p) Due to bad soil.

(q) Transferred to encamping-ground and Police bungalow.

(r) Sold with trees.

STATEMENT NO. III (c).

PROGRESS STATEMENT OF GROVES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3						4						5	6
District or Division.	Area of groves at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.						DEDUCTIONS DURING THE PERIOD.						Area stocked with trees or plants alive at the end of the triennial period.	REMARKS.
		Corrections of areas as recorded.	Successfully planted.	Transfers from other heads.	Transfers from other management.	Other causes.	Total additions.	Corrections of areas as recorded.	Failures.	Transfers to other heads.	Transfers to other management.	Other causes.	Total deductions.		
	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	<i>Acres and decimals.</i>	
Rawalpindi Division	402.82	...	...	...	...	...	...	...	...	...	...	...	...	402.82	
Kangra Division	0.85	3.56	...	(a) 0.03	...	...	3.59	0.12	...	...	...	...	0.12	4.32	
Lahore Division, No. I	18.07	...	...	...	...	...	...	...	...	...	...	...	...	18.07	
Lahore Division, No. II	0.65	...	...	...	...	...	...	...	...	...	...	...	...	0.65	
Jullundur Division	1.94	...	...	...	(b) 20.52	...	20.52	...	...	...	...	(c) 0.20	0.20	22.26	
Lyallpur Division	190.16	...	...	...	...	...	...	...	...	(d) 190.16	...	...	190.16	...	
Multan Division	3.06	...	...	...	...	...	...	3.06	...	...	...	...	3.06	...	
Ambala Division	20.52	...	...	...	...	...	...	...	...	...	(e) 20.52	...	20.52	...	
Total for 1914-15 to 1916-17	638.07	3.56	...	0.03	20.52	...	24.11	3.18	...	190.16	20.52	0.20	214.06	448.12	
Total for 1911-12 to 1913-14	642.55	...	1.00	17.36	...	78.04	96.40	1.92	...	...	...	98.96	100.88	638.07	

(a) Transferred from nursery.

(b) Transferred from Ambala Provincial Division.

(c) Sold.

(d) To plantations.

(e) Transferred to Jullundur Provincial Division.

STATEMENT No. IV (a).

PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4					5					6	7
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.	
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	
HILL AND SUBMONTANE DISTRICTS WITH GOOD RAINFALL.														
Mubala ...	314.77	231.91	...	42.09	...	...	42.09	...	(a) 6.50	...	...	...	6.50	267.50
Kangra ...	679.00	583.30	...	84.00	...	...	84.00	449.25	...	...	...	...	449.25	218.05
Hoshiarpur ...	517.59	529.00	...	6.75	...	...	6.75	37.41	...	...	...	...	37.41	498.34
Kurdaspur ...	643.85	570.00	...	27.50	(b) 1.84	...	29.34	...	5.71	...	...	...	5.71	593.63
Sialkot ...	748.25	596.87	...	64.75	...	...	64.75	130.37	(c) 15.00	39.00	...	...	184.37	477.25
Sialkot Municipality ...	10.30	9.55	...	0.80	...	...	0.80	...	...	0.80	...	...	0.80	9.55
Gujrat ...	676.34	613.07	...	63.86	...	...	63.86	22.38	(d) 22.38	20.35	...	(e) 4.22	46.95	629.98
Gujrat Municipality ...	12.33	7.25	...	0.14	* 0.80	...	0.94	0.45	...	0.29	...	...	0.74	7.45
Rawalpindi ...	800.00	412.00	...	55.75	...	...	55.75	...	(a) 19.75	10.00	...	...	29.75	438.00
Rawalpindi Municipality ...	18.00	12.00	...	...	...	...	...	...	...	...	...	...	...	12.00
Total ...	4,420.43	3,564.95	...	395.64	2.64	...	348.28	617.48	69.34	70.44	...	4.22	761.48	3,151.75
PLAINS DISTRICTS WITH GOOD IRRIGATION FACILITIES.														
Karnal ...	677.89	160.09	...	7.00	...	...	7.00	...	(f) 1.12	0.75	...	...	1.87	165.22
Karnal Municipality ...	8.45	7.95	...	...	...	...	...	...	(g) ...	...	...	...	...	7.95
Ludhiana ...	291.81	237.31	...	24.75	...	...	24.75	...	(h) 10.50	...	...	...	10.50	251.56
Ferozepore ...	748.35	589.28	...	64.50	...	...	64.50	...	(i) 20.50	...	...	...	20.50	633.28
Jhang ...	700.00	174.75	9.35	41.50	...	...	50.85	...	(j) 8.05	1.50	...	...	9.55	216.05
Jhang Municipality ...	19.88	18.88	...	1.00	...	...	1.00	...	(k) 0.12	...	...	0.88	1.00	18.88
Chiniot Municipality ...	1.35	0.94	...	...	...	...	...	...	...	...	...	...	...	0.94
Jullundur ...	398.99	250.68	...	1.13	...	...	1.13	2.00	(l) ...	...	...	...	2.00	249.81
Montgomery ...	283.00	136.00	...	39.00	...	18.00	57.00	...	(m) 19.00	...	...	...	19.00	174.00
Lyalpur ...	1,101.50	674.50	...	56.00	...	...	56.00	...	...	...	...	...	...	730.50
Lahore ...	400.00	349.44	...	17.75	...	...	17.75	...	...	...	...	...	...	367.19
Lahore Municipality ...	110.68	97.99	...	1.11	...	...	1.11	0.27	(n) ...	...	...	...	0.27	98.83
Amritsar ...	353.23	232.71	...	30.05	(k) 1.30	(l) 0.40	31.75	59.15	(m) 4.43	17.91	...	...	81.49	182.97
Carried over ...	5,095.13	2,930.52	9.35	283.79	1.30	18.40	312.84	61.42	63.72	20.16	...	0.88	146.18	3,097.18

(a) For want of water.

(b) Transferred from Lahore Provincial Division, No. II.

(c) Due to bad monsoons.

(d) Due to want of water and frost.

(e) Rooted out by winds.

* Transferred from Rawalpindi Provincial Division.

(f) Due to scarcity of canal water.

(g) Failed to strike root.

(h) Due to insufficient water, sandy soil, and frost.

(i) Due to bad soil and scarcity of rainfall.

(j) Due to want of proper irrigation and white ants.

† Transferred from nursery.

(k) Transferred from zamindari road.

(l) Self-grown.

(m) Scarcity of rain.

STATEMENT No. IV (a)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE DISTRICTS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4					5					6	
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfer to other management.	Other causes.		Total deductions.
Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
PLAINS DISTRICTS WITH GOOD IRRIGATION FACILITIES—CONCLD.														
Brought forward	5,095.13	2,930.52	9.35	283.79	1.30	18.40	312.84	61.42	63.72	20.16	..	0.88	146.18	3,097.18
Amritsar Municipality	66.00	58.09	...	0.38	...	...	0.38	...	...	1.85	...	...	1.85	56.62
Gujranwala	638.74	357.28	...	37.63	...	...	37.63	8.00	5.50	...	5.64	...	19.14	375.77
Gujranwala Municipality	20.03	...	10.79	0.50	5.64	...	16.93	...	...	...	...	...	...	16.93
Shahpur	784.50	531.90	...	38.00	...	...	38.00	...	...	...	11.50	...	11.50	558.40
Shahpur Municipality	13.88	13.88	...	1.00	46.00	...	47.00	...	...	...	...	...	...	60.88
Rohitak	461.45	230.07	...	11.00	...	...	11.00	...	...	8.00	...	...	8.00	233.07
Total	7,079.73	4,121.74	20.14	372.30	52.94	18.40	463.78	69.42	69.22	30.01	17.14	0.88	186.67	4,398.85
PLAINS DISTRICTS WITH SLIGHT OR NO IRRIGATION FACILITIES.														
Gurgaon	467.77	263.50	...	...	...	...	...	...	...	...	...	...	...	263.50
Hissar	393.81	146.29	...	5.00	...	...	5.00	...	...	...	...	...	...	151.39
Hissar Municipality	9.15	6.69	...	6.52	...	...	6.52	...	...	...	...	...	...	13.21
Jhelum	353.89	317.65	...	24.47	...	0.09	24.56	...	4.21	...	...	...	4.21	338.00
Jhelum Municipality	16.52	32.03	...	6.48	...	...	6.48	...	2.25	...	...	...	2.25	36.26
Attock	849.00	138.60	...	3.00	...	...	3.00	...	...	...	...	...	...	141.60
Attock Municipality	5.24	4.53	...	...	...	...	...	...	...	...	...	...	...	4.53
Mianwali	49.37	46.92	...	15.50	...	...	15.50	...	1.00	...	...	...	1.00	61.42
Multan	1,028.12	334.41	9.85	55.07	...	...	64.92	46.05	19.12	3.21	6.03	...	74.41	324.92
Multan Municipality	35.01	27.90	...	3.08	3.63	...	6.71	...	1.14	0.23	...	...	1.37	33.24
Muzaffargarh	358.65	204.38	...	16.83	...	...	16.83	...	6.48	6.00	...	...	12.48	208.73
Dera Ghazi Khan	132.00	112.74	...	2.00	...	...	2.00	...	...	...	...	...	...	114.74
Dera Ghazi Khan Municipality	19.50	8.00	...	9.00	...	...	9.00	...	...	1.00	...	...	1.00	16.00
Total	3,723.23	1,643.74	9.85	146.95	3.63	0.09	160.52	46.05	34.20	10.44	6.03	...	96.72	1,707.54
Total for 1914-15 to 1916-17	15,223.39	9,330.43	29.99	864.89	59.21	18.49	972.58	732.95	172.76	110.89	23.17	5.10	1,044.87	9,258.14
Total for 1911-12 to 1913-14	15,251.42	9,014.00	106.02	885.07	58.10	0.09	1,049.28	172.42	210.92	67.48	232.73	11.69	695.24	9,368.04

- (a) Due to the effect of sem and frequent stoppage of canal water.
 (o) Transferred to Municipality.
 (p) Transferred from District Board.
 (q) 11.50 transferred from District Board, and 34.5 from Sargodha Division, Lower Jhelum Canal.
 (r) Transferred from plantations.

- (s) Died owing to hot weather.
 (t) Destroyed by white ants.
 (u) Transferred to Multan Municipality and Police Department.
 (v) Transferred from Multan District Board.
 (w) Due to water-logging floods, seab land, and dust storms.

STATEMENT No. IV (b).

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4					5						6	7
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.		
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	
Upper Bari Doab Canal, 1st Division.	55.00	45.00	...	...	...	...	...	...	...	...	...	...	...	45.00	
Upper Bari Doab Canal, 2nd Division.	150.34	57.00	...	60.34	...	...	60.34	...	...	...	...	...	...	117.34	
Upper Bari Doab Canal, 3rd Division.	183.60	126.20	...	28.00	...	...	28.00	0.80	...	...	...	...	0.80	153.40	
Upper Bari Doab Canal, 4th Division.	152.90	152.90	...	...	...	...	...	...	(a)	...	...	...	...	152.90	
Upper Sutlej Division, Inundation Canals.	541.18	380.12	40.70	0.24	...	...	40.94	...	9.60	...	...	...	9.60	411.46	
Central Workshop Division...	0.14	0.14	...	...	(c)	...	...	...	(d)	...	...	(b)	0.14	...	
Lower Bari Doab Canal, Balloki Division.	10.50	...	...	17.05	71.91	...	88.96	...	15.00	...	...	...	15.00	73.96	
Lower Bari Doab Canal, Okara Division.	508.00	79.26	96.20	187.10	17.34	...	300.64	56.09	125.80	...	71.91	...	253.80	126.19	
Lower Bari Doab Canal, Montgomery Division.	53.60	17.16	2.00	33.88	...	...	35.88	...	18.90	...	17.34	...	36.24	16.80	
Lower Bari Doab Canal, Khanewal Division.	241.44	...	...	119.23	...	...	119.23	...	...	...	...	...	...	119.23	
Multan Canals Division ...	642.60	315.72	...	8.20	...	(f)	9.60	...	2.80	0.80	...	...	3.60	321.72	
Dera Ghazi Khan Division, Indus Canals.	687.06	417.34	25.63	28.52	...	(j)	51.70	61.75	17.25	17.55	...	(m)	104.43	364.61	
Muzaffargarh Canals Division	715.01	304.17	19.66	7.53	...	(n)	36.19	14.04	17.00	14.20	...	(m)	47.04	293.32	
Lower Sutlej Inundation Canals Division.	506.40	232.16	0.20	...	...	(j)	1.80	...	0.20	2.96	...	(m)	16.36	217.60	
Western Jumna Canal, Karnal Division.	112.50	54.55	...	6.60	...	(p)	6.60	...	...	...	...	...	...	61.15	
Western Jumna Canal, Delhi Division.	381.24	213.57	4.00	3.00	...	(p)	7.00	45.79	2.00	...	...	...	47.79	172.73	
Western Jumna Canal, Hissar Division.	206.70	126.10	2.20	1.83	62.40	...	66.43	...	...	...	72.20	...	72.20	120.33	
Western Jumna Canal, Rohtak Division.	401.16	168.40	23.30	0.70	72.20	...	96.20	...	...	...	62.40	19.00	81.40	183.20	
Sirhind Canals, Ferozepore Division.	361.20	123.22	6.22	...	...	(v)	6.22	...	...	...	17.40	...	17.40	112.04	
Sirhind Canals, Ludhiana Division.	144.92	197.79	3.40	15.60	17.40	...	36.40	44.46	...	...	81.00	...	125.46	103.73	
Sirhind Canals, Patiala Division.	221.74	172.24	...	...	...	...	...	...	0.40	0.60	...	...	1.00	171.24	
Sirhind Canals, Bhatinda Division.	144.80	59.39	4.57	17.90	...	(x)	22.47	17.57	...	...	...	...	17.57	164.29	
Sirhind Canals, Rupar Division.	103.80	...	...	2.00	81.60	...	83.60	9.80	...	...	...	...	9.80	73.80	
Upper Chenab Canal, Marala Division.	277.14	...	...	11.39	93.30	...	109.69	...	8.52	...	...	...	8.52	101.17	
Upper Chenab Canal, Gujranwala Division.	179.44	73.38	...	33.70	1.00	...	34.70	...	8.52	...	98.30	...	106.82	1.26	
Upper Chenab Canal, Sheikhupura Division.	52.90	1.00	...	11.50	...	(3)	11.50	4.00	...	...	1.00	...	5.00	7.50	
Upper Chenab Canal, Raya Division.	151.00	23.64	...	11.90	...	(3)	13.30	...	...	...	...	...	...	36.94	
Lower Chenab Canal, Khanki Division.	220.09	148.60	...	2.20	...	(6)	2.20	...	...	...	85.22	3.56	88.78	62.02	
Lower Chenab Canal, Hafizabad Division.	110.50	...	...	...	85.22	...	85.22	...	...	...	...	...	...	85.22	
Lower Chenab Canal, Lyallpur Division.	317.20	317.20	...	2.22	...	...	2.22	...	...	...	...	...	...	319.42	
Lower Chenab Canal, Lower Gurgera Division.	636.50	386.68	0.20	74.50	...	...	74.70	0.60	13.94	...	...	...	14.54	446.84	
Carried over ...	8,470.60	4,192.93	228.28	680.13	507.37	15.95	1,431.73	254.90	239.53	35.91	507.37	45.58	1,083.29	4,541.37	

STATEMENT No. IV (b)—concluded.

PROGRESS STATEMENT OF AVENUES IN THE CANAL DIVISIONS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4					5						6
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.						Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.	
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
Brought forward	8,470.60	4,192.93	228.28	680.13	507.37	15.95	1,431.73	254.90	239.53	35.91	507.37	45.48	1,083.29	4,541.37
Lower Chenab Canal, Upper Gugera Division.	486.98	410.91	3.28	14.70	...	...	17.98	0.54	...	...	...	...	0.54	428.35
Lower Chenab Canal, Jhang Division.	440.86	260.15	2.92	22.90	...	...	25.82	...	...	...	...	...	...	285.97
Lower Chenab Canal, Burala Division.	493.61	315.16	...	...	...	...	...	...	...	...	...	...	...	315.16
Upper Jhelum Canal, Mangla Division.	2.00	0.50	...	2.90	...	...	2.90	...	...	...	...	...	...	3.40
Upper Jhelum Canal, Jhelum Division.	32.60	2.00	...	6.00	...	...	6.00	...	...	6.00	...	...	6.00	2.00
Upper Jhelum Canal, Phalia Division.	63.80	1.60	...	47.00	...	...	47.00	...	(8) 24.20	...	...	...	24.20	24.40
Upper Jhelum Canal, Gujrat Division.	30.00	3.10	...	0.40	...	(j) 0.05	0.45	...	(f) 0.25	...	...	...	0.25	3.30
Lower Jhelum Canal, Rasul Division.	269.24	119.80	...	6.60	...	(10) (3)	6.60	...	...	...	(9) 10.16 (11)	...	10.16	116.24
Lower Jhelum Canal, Sargodha Division.	573.00	367.80	...	42.40	257.60	(12) 1.50	301.50	14.90	...	2.56	(13) 268.10	...	285.56	383.74
Lower Jhelum Canal, Kirana Division.	782.10	492.80	47.60	46.97	222.40	(14) ...	316.97	21.30	(h) 21.25	...	(15) 358.10	...	400.65	409.12
Lower Jhelum Canal, Shahpur Division.	447.40	...	...	...	138.66	...	138.66	...	...	...	16.80	...	16.80	121.86
Shahpur Inundation Canals Division.	237.49	67.86	...	...	...	...	...	...	...	...	...	...	...	67.86
Total for 1914-15 to 1916-17	12,329.68	6,234.61	282.08	870.00	1,126.03	17.50	2,295.61	291.64	285.23	44.47	1,165.53	45.58	1,827.45	6,702.77
Total for 1911-12 to 1913-14	10,595.60	5,313.22	253.05	1,184.00	405.90	14.70	1,857.65	238.50	196.19	45.25	397.24	9.08	936.26	6,234.61

- (a) Due for want of water.
 (b) No avenue exists.
 (c) Transferred from Okara Division.
 (d) Seed not germinated.
 (e) Transferred from Montgomery Division.
 (f) Due to hot weather and bad soil.
 (g) Transferred to Balloki Division.
 (h) Due to bad soil.
 (i) Transferred to Okara Division.
 (j) Transferred from nursery.
 (k) Eroded by river.
 (l) Due to bad soil and Soma water.
 (m) Sold.
 (n) 6.0 miles self-grown.
 3.0 due to renewal of lengths failed.
 (o) Damaged by floods and white ante.
 (p) Transferred from Rohtak Division.
 (q) Transferred to Rohtak Division.
 (r) Transferred from Hissar Division.
 (s) Transferred to Hissar Division.
 (t) 7 miles due to removal of silting reaches.
 12 miles on account of widening Butana Branch.
 (u) Transferred to Ludhiana Division.
 (v) Transferred from Ferozepore Division.
 (w) Transferred to Rupar Division.
 (x) 81 miles transferred from Ludhiana Division.
 0.6 transferred from Patiala Division.
 (y) Transferred from Gujranwala Division.
 (z) " " Sheikhupura Division.

- (1) Transferred to Marala Division.
 (2) " " Gujranwala Division.
 (3) " " Plantation.
 (4) " " to Hafizabad Division.
 (5) Due to setting back banks.
 (6) Transferred from Khanki Division.
 (7) 1.6 miles destroyed by Janglis.
 11.14 due to bad soil.
 1.20 silting tank.
 (8) Scarcity of rain.
 (9) Transferred to Shahpur Division.
 (10) 240.8 transferred from Kirana Division.
 16.8 " from Shahpur Division.
 (11) 34.5 " to Sargodha Municipality.
 222.4 " " Kirana Division.
 11.2 " " Shahpur Division.
 (12) Transferred from Sargodha Division.
 (13) 117.30 transferred to Shahpur Division.
 240.80 " " Sargodha Division.
 (14) 10.16 " from Rasul Division.
 11.20 " " Sargodha Division.
 117.30 " " Kirana Division.
 (15) 16.80 " " Sargodha Division.

STATEMENT NO. IV (c).

PROGRESS STATEMENT OF AVENUES IN THE PROVINCIAL DIVISIONS FOR THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4					5					6	7
District or Division.	Length of roads and canals suitable for avenues.	Length of roads and canals fully stocked with trees at the beginning of the triennial period.	ADDITIONS DURING THE PERIOD.					DEDUCTIONS DURING THE PERIOD.					Length of roads and canals fully stocked with trees or plants alive at the end of the triennial period.	REMARKS.
			Corrections of lengths as recorded.	Successfully planted.	Transfers from other management.	Other causes.	Total additions.	Corrections of lengths as recorded.	Failures.	Felled.	Transfers to other management.	Other causes.	Total deductions.	
	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.	Miles and decimals.
Rawalpindi Division	128.90	104.29	12.45	7.90	..	(a) 1.80	22.15	...	(b) 2.00	1.60	(c) 0.80	...	4.40	122.04
Kangra Division ...	167.20	200.00	19.51	15.90	...	...	35.41	0.11	...	0.30	...	...	0.41	235.00
Lahore Division No. I.	77.22	33.24	...	5.00	...	...	5.00	...	...	...	...	...	...	38.24
Lahore Division No. II.	21.12	52.98	1.77	6.77	...	...	8.54	...	(d) 1.60	0.42	(e) 1.84	...	3.86	57.66
Jullundur Division	193.31	87.18	1.31	22.98	(f) 52.45	...	76.74	10.45	(b) 5.63	1.00	...	...	17.08	146.84
Lyallpur Division	39.79	37.01	...	3.50	...	...	3.50	19.14	...	...	...	...	19.14	21.37
Multan Division ...	44.02	32.95	2.50	5.75	...	...	8.25	...	(b) 0.75	...	...	...	0.75	40.45
Ambala Division ...	220.59	161.15	...	31.73	...	...	31.73	9.00	(g) 8.17	1.26	(h) 52.45	...	70.88	122.00
Gurgaon Division...	73.77	49.75	...	6.75	...	...	6.75	...	...	...	...	...	...	55.50
Total for 1914-15 to 1916-17.	965.92	758.55	37.54	106.28	52.45	1.80	198.07	38.70	18.15	4.58	55.09	...	116.52	840.10
Total for 1911-12 to 1913-14.	945.27	752.66	11.85	131.91	23.25	158.41	325.42	82.64	14.36	5.92	15.57	159.29	277.78	800.30

(a) Transferred from nursery.
 (b) Due to drought and bad soil.
 (c) Transferred to Gujrat Municipality.
 (d) Due to bad soil.

(e) Transferred to Gurdaspur District Board.
 (f) Transferred from Ambala Provincial Division.
 (g) Due to want of sufficient water and excessive heat.
 (h) Transferred to Jullundur Provincial Division.

STATEMENT No. V (a).
INCOME FROM ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL
PERIOD 1914-15 TO 1916-17.

1	2	3	4	5	6	7	8
District or Division.	Ornamental Gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Simla	...	171	1,764	...	...	1,935	
Ambala	1,054	...	...	24,918	...	25,972	
Kangra	1,215	...	...	5,862	...	7,077	
Hoshiarpur	3,800	...	...	98,487	...	1,02,287	
Gurdaspur	2,417	...	42,990	...	7,117	52,524	
Sialkot	3,183	1,266	...	1,16,959	1,193	1,27,601	
Sialkot Municipality	193	...	...	1,085	...	1,278	
Gujrat	1,088	...	...	49,399	...	50,487	
Gujrat Municipality	46	...	102	1,016	239	1,403	
Rawalpindi	3,074	...	...	18,820	...	21,894	
Rawalpindi Municipality	3,629	...	...	2,065	44,616	50,310	
Karnal	2,430	...	...	8,387	411	11,228	
Ludhiana	3,433	...	...	30,009	...	33,442	
Ferozepore	3,199	...	4,388	63,922	...	76,459	
Jhang	3,228	...	...	5,446	...	8,674	
Jhang Municipality	293	...	...	2,567	896	3,756	
Chiniot Municipality	63	...	...	59	...	122	
Jullundur	2,406	1,031	3,296	36,896	639	44,268	
Montgomery	1,171	...	...	4,562	...	5,733	
Lyallpur	...	10	...	6,649	...	6,659	
Lahore	49	...	...	20,059	...	20,108	
Lahore Municipality	18,488	...	...	11,281	2,792	32,561	
Amritsar	1,622	...	...	35,207	...	36,829	
Amritsar Municipality	15,012	...	...	31,744	...	46,756	
Gujranwala	3,724	...	...	18,532	...	27,256	
Gujranwala Municipality	1,908	...	...	1,312	...	3,220	
Shahpur	3,561	3,300	...	40,507	35,344	87,712	
Shahpur Municipality	...	...	...	2,391	410	2,801	
Rohtak	3,585	31	...	13,305	...	16,921	
Gurgaon	362	17	885	12,757	...	14,021	
Hissar	6,612	...	...	3,325	968	10,903	
Hissar Municipality	...	...	...	1,294	738	2,032	
Jhelum	9,593	...	...	21,078	...	30,671	
Attock	2,041	...	...	3,745	...	5,786	
Attock Municipality	88	...	...	857	...	945	
Mianwali	5,719	...	6,071	559	...	12,349	
Multan	4,960	...	...	5,027	...	9,987	
Multan Municipality	5,613	...	...	3,330	...	8,943	
Muzaffargarh	9,540	...	...	14,446	...	23,986	
Dera Ghazi Khan	...	...	...	6,006	...	6,006	
Total for 1914-15 to 1916-17	1,48,399	5,826	59,446	7,23,870	95,361	10,32,902	
Total for 1911-12 to 1913-14	1,33,354	5,084	47,367	6,30,575	1,20,038	9,41,418	

STATEMENT No. V (b).

INCOME FROM ARBORICULTURE IN THE CANAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4	5	6	7	8
District or Division.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous.	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, I Division	2,267	...	4,981	6,985	12,788	27,021	
Upper Bari Doab Canal, II Division	175	...	16,514	...	3,815	20,504	
Upper Bari Doab Canal, III Division	862	...	15,628	...	2,137	18,627	
Upper Bari Doab Canal, IV Division	1,470	4	9,807	32	2,968	15,281	
Upper Sutlej Division Inundation Canals.	164	...	7,653	1,236	4,479	13,582	
Lower Bari Doab Canal, Balloki Division.	...	...	81	34	5,941	6,056	
Lower Bari Doab Canal, Okara Division.	480	...	1,358	...	...	1,836	
Lower Bari Doab Canal, Montgomery Division.	2	...	...	...	...	2	
Lower Bari Doab Canal, Khanewal Division.	...	...	...	...	78	78	
Multan Canals Division ...	151	...	3,123	205	4,300	7,779	
Dera Ghazi Khan Indus Canals ...	423	4	392	8,108	595	9,532	
Muzaffargarh Canals Division ...	632	...	5,148	21,819	2,208	29,807	
Lower Sutlej Inundation Canals Division.	...	...	2,194	2,923	441	5,558	
Western Jumna Canal, Karnal Division.	1,381	...	10,773	...	1,456	13,610	
Western Jumna Canal, Delhi Division	7,757	55	21,876	...	2,451	32,139	
Western Jumna Canal, Hissar Division	69	...	3,118	...	1,993	5,180	
Western Jumna Canal, Rohtak Division.	842	...	7,363	688	712	9,605	
Sirhind Canal, Ferozepore Division ...	146	...	21,504	440	3,929	26,019	
Sirhind Canal, Ludhiana Division ...	369	...	24,259	...	9,949	34,577	
Sirhind Canal, Patiala Division ...	82	...	6,053	1,099	26,792	34,026	
Sirhind Canal, Bhatinda Division ...	...	...	9,330	...	2,810	12,140	
Sirhind Canal, Rupar Division ...	178	...	3,183	...	21,239	24,600	
Upper Chenab Canal, Marala Division	61	...	255	...	223	539	
Upper Chenab Canal, Gujranwala Division.	...	...	44	...	...	44	
Upper Chenab Canal, Sheikhupura Division.	...	...	13	...	324	337	
Upper Chenab Canal, Raya Division ...	25	...	...	...	195	220	
Lower Chenab Canal, Khanki Division	625	...	5,750	37	2,089	8,451	
Lower Chenab Canal, Hafizabad Division.	...	...	2,456	...	698	3,154	
Lower Chenab Canal, Lyallpur Division.	122	...	3,885	210	18,884	23,051	
Lower Chenab Canal, Lower Gugera Division.	95	...	2,779	990	8,161	12,025	
Lower Chenab Canal, Upper Gugera Division.	2,248	...	7,601	954	...	10,803	
Lower Chenab Canal, Jhang Division	24	...	3,301	342	1,722	5,369	
Lower Chenab Canal, Burala Division	101	...	435	82	88	706	
Upper Jhelum Canal, Mangla Division	...	...	...	...	152	152	
Upper Jhelum Canal, Jhelum Division	179	...	...	...	110	289	
Upper Jhelum Canal, Gujrat Division	...	...	2	...	174	176	
Lower Jhelum Canal, Rasul Division...	128	...	375	...	4,039	4,542	
Lower Jhelum Canal, Sargodha Division.	1,941	...	3,544	136	737	6,358	
Lower Jhelum Canal, Kirana Division	160	...	761	54	3,935	4,910	
Lower Jhelum Canal, Shahpur Division	34	...	188	8	385	615	
Shahpur Inundation Canals Division	...	...	170	1,666	23	1,859	
Total for 1914-15 to 1916-17 ...	23,203	63	2,05,895	48,098	1,53,920	4,31,179	
Total for 1911-12 to 1913-14 ...	16,580	...	2,44,811	46,611	1,13,401	4,21,403	

STATEMENT No. V (c):

INCOME FROM ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING THE
TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4	5	6	7	8.
District or Division.	Ornamental gardens.	Nurseries.	Plantations.	Groves and avenues.	Miscellaneous	Total.	REMARKS.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Rawalpindi Division ...	529	35	6,980	1,164	2,854	11,562	
Kangra " ...	...	...	...	1,373	2,049	3,422	
Lahore Division No. I ...	...	...	...	2,934	...	2,934	
" " " II ...	...	...	...	5,489	6,390	11,879	
Jullundur Division ...	...	...	...	11,796	...	11,796	
Lyalpur " ...	128	...	...	...	4,471	4,599	
Multan " ...	...	...	...	...	582	582	
Ambala " ...	...	...	...	24,867	...	24,867	
Gurgaon " ...	...	...	...	4,409	1,525	5,934	
Total for 1914-15 to 1916-17...	657	35	6,980	52,032	17,871	77,575	
Total for 1911-12 to 1913-14...	471	42	730	59,525	24,223	84,991	

STATEMENT No. VI (a).

EXPENDITURE ON ARBORICULTURE IN THE DISTRICTS DURING THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4	5	6	7	8	9	10	11	12
District or Division.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
Simla	...	...	24	...	...	...	...	...	...	24	
Ambala	4,885	...	1,600	800	...	...	22,064	6,500	2,830	38,649	
Kangra	2,663	...	...	...	...	...	13,484	...	...	16,147	
Hoshiarpur	7,811	...	...	...	...	...	29,287	...	...	37,098	
Gurdaspur	11,757	...	...	...	2,337	...	...	...	34,427	48,581	
Sialkot	18,717	...	1,463	...	...	...	23,687	12,246	15,163	71,266	
Sialkot Municipality	682	...	...	...	...	...	...	50	1,358	2,094	
Gujrat	7,577	...	1,425	54	...	...	28,620	170	4,950	42,796	
Gujrat Municipality	2,231	...	...	...	9	...	...	...	1,370	3,610	
Rawalpindi	1,578	...	...	...	...	...	12,538	...	...	14,116	
Rawalpindi Municipality	9,543	...	...	...	...	...	648	...	6,180	16,371	
Karnal	2,192	...	543	...	...	...	7,678	2,171	2,090	14,677	
Ludhiana	13,041	2,204	756	252	...	...	25,684	...	540	42,477	
Ferozepore	28,880	...	...	...	374	740	24,579	9,515	10,244	74,332	
Jhang	13,781	...	84	38	...	...	7,443	3,880	17,978	43,204	
Jhang Municipality	3,084	...	...	...	...	...	3,030	...	...	6,114	
Chiniot Municipality	...	...	...	...	...	...	277	...	312	589	
Jullundur	15,034	...	3,440	...	317	...	17,246	...	8,056	44,093	
Montgomery	5,627	...	300	...	...	...	9,100	386	3,624	19,037	
Lyallpur	...	...	...	...	...	...	55,723	6,000	19,928	81,649	
Lahore	65	...	...	...	...	...	17,489	1,251	2,540	21,345	
Lahore Municipality	87,217	...	...	...	360	323	50,328	...	11,486	1,49,714	
Amritsar	4,044	...	...	...	...	...	25,163	...	4,472	33,679	
Amritsar Municipality	595	...	...	...	...	...	17,698	...	32,931	51,224	
Gujranwala	21,686	...	1,104	...	...	...	29,328	...	12,861	64,979	
Gujranwala Municipality	8,553	...	...	...	...	...	3,799	...	...	12,352	
Shahpur	24,506	...	...	...	...	...	53,320	...	12,350	90,176	
Shahpur Municipality	5,302	...	...	...	...	...	2,138	...	...	7,940	
Rehtak	12,260	...	306	...	...	...	24,509	...	5,369	42,444	
Gurgaon	5,439	...	2,618	...	531	...	16,214	...	3,936	28,788	
Hissar	9,231	...	1,861	...	...	...	29,615	...	...	40,707	
Hissar Municipality	...	...	...	...	...	...	9,789	...	3,278	13,067	
Jhelum	12,992	...	...	...	...	...	4,399	...	17,315	34,706	
Attock	3,317	...	576	...	...	...	5,107	4,504	268	13,772	
Attock Municipality	2,570	...	...	...	...	...	455	...	...	3,025	
Mianwali	15,123	1,618	...	...	2,488	4,100	6,976	9,077	3,290	42,672	
Multan	5,059	...	...	...	...	...	4,462	...	14,746	24,267	
Multan Municipality	19,731	...	...	...	...	...	469	...	432	20,632	
Muzaffargarh	18,337	433	...	...	...	...	18,256	1,397	4,764	43,687	
Dera Ghazi Khan	...	...	...	...	...	...	...	...	3,595	3,595	
Dera Ghazi Khan Municipality	...	...	...	...	...	...	3,696	...	8,952	12,648	
Total for 1914-15 to 1916-17	4,06,106	4,255	16,103	1,144	6,526	5,163	6,04,298	57,147	2,71,601	13,72,343	
Total for 1911-12 to 1913-14	3,74,236	18,642	15,189	2,850	17,251	1,124	5,06,806	44,578	2,11,330	11,92,006	

STATEMENT No. VI (b).

EXPENDITURE ON ARBORICULTURE IN THE CANAL DIVISIONS DURING THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

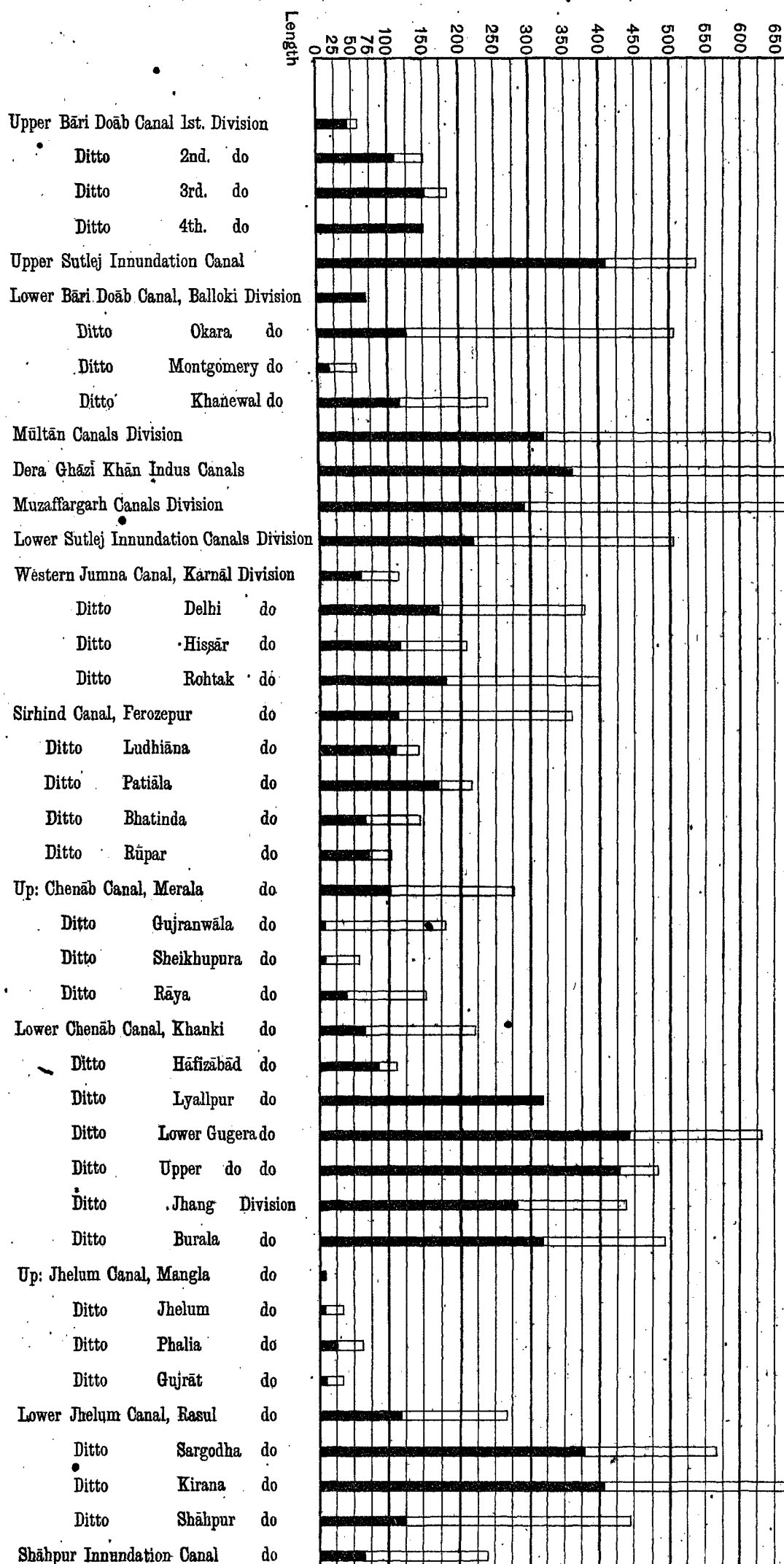
1	2	3	4	5	6	7	8	9	10	11	12
District or Division.	WORKS.								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General Supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Upper Bari Doab Canal, 1st Division ...	7,378	...	...	...	4,836	...	3,037	...	1,665	16,916	
Ditto, 2nd Division ...	5,261	...	100	415	5,470	5,932	5,198	4,088	5,806	32,265	
Ditto, 3rd Division ...	5,242	10	...	166	12,135	6,410	57	522	...	24,542	
Ditto, 4th Division ...	4,010	...	...	...	11,050	3,524	400	...	5,723	24,707	
Upper Sutlej Division, Inundation Canals	19,210	500	...	...	2,160	...	5,794	90	2,226	29,980	
Central Workshop Division ...	...	...	...	...	711	...	...	...	...	711	
Lower Bari Doab Canal, Balloki Division	4,018	...	...	10	5,422	...	4,970	350	...	14,770	
Ditto, Okara Division ..	4,178	8,583	110	99	11,079	4,497	4,441	2,945	2,694	38,626	
Ditto, Montgomery Division.	1,898	1,564	8	...	13,974	14,149	...	6,667	1,124	39,374	
Ditto, Khanewal Division.	5,467	3,167	...	...	1,339	7,104	269	10,154	...	27,440	
Multan Canals Division ...	10,057	200	...	799	6,875	196	18,373	631	...	37,132	
Dera Ghazi Khan Indus Canals Division	7,073	380	505	552	5,887	1,250	31,268	2,400	...	49,315	
Muzaffargarh Canals Division	4,314	...	244	...	6,428	...	17,471	2,906	...	31,363	
Lower Sutlej Inundation Canals Division...	4,127	70	970	...	5,275	...	5,240	...	...	15,682	
Western Jumna Canal, Karnal Division ...	685	...	...	...	8,410	4,916	4,683	4,378	...	23,072	
Ditto, Delhi Division ...	10,369	89	...	...	4,651	1,315	99	...	2,180	18,643	
Ditto, Hissar Division ...	6,865	35	...	...	2,808	257	921	455	2,555	13,896	
Ditto, Rohtak Division...	4,383	778	...	25	490	235	1,664	84	6,275	13,934	
Sirhind Canal, Ferozepore Division ...	2,006	31	...	...	13,069	...	...	...	...	15, 06	
Ditto, Ludhiana Division ...	5,385	...	...	...	7,645	4,516	...	733	...	18,279	
Ditto, Patiala Division ...	8,249	...	...	...	...	...	1,326	...	...	9,575	
Ditto, Bhatinda Division ...	...	...	...	...	14,664	8,332	1,187	672	...	24,855	
Ditto, Rupar Division ...	851	...	...	...	808	...	712	170	5,485	7,976	
Upper Chenab Canal, Marala Division ...	897	360	210	...	9,286	315	...	...	3,271	14,333	
Ditto, Gujranwala Division	3,171	489	145	...	4,595	1,030	...	...	2,607	12,037	
Ditto, Sheikhupura Division	5,875	401	...	...	116	863	23	1,586	...	8,364	
Ditto, Raya Division ...	4,725	342	...	...	659	1,157	423	716	1,519	9,541	
Lower Chenab Canal, Khanki Division ...	4,731	...	...	...	12,931	...	5,038	579	2,070	25,349	
Ditto, Hafizabad Division...	190	...	...	...	3,198	118	218	...	572	4,296	
Ditto, Lyallpur Division	1,855	496	...	...	14,225	3,183	3,042	969	13,971	37,746	
Ditto, Lower Gugera Division.	5,343	...	...	...	22,764	3,036	6,113	4,270	...	41,526	
Ditto, Upper Gugera Division.	1,462	...	...	...	15,381	1,102	4,303	1,645	8,133	31,976	
Ditto, Jhang Division ...	4,886	1,351	...	...	1,905	188	4,273	164	1,624	14,391	
Ditto, Burela Division ...	3,447	...	...	...	6,542	36	7,426	693	6,540	24,684	
Upper Jhelum Canal, Mangla Division ...	6,136	...	...	...	...	654	2,358	1,319	605	11,072	
Ditto, Jhelum Division ...	3,837	...	...	...	1,360	4,642	...	186	4,033	14,058	
Ditto, Phalia Division ...	1,262	1,020	200	150	1,271	622	30	282	1,647	6,484	
Ditto, Gujrat Division ...	450	230	80	97	3,951	2,379	250	247	1,212	9,396	
Lower Jhelum Canal, Rasul Division ...	7,223	62	...	...	551	...	3,047	1,009	3,084	14,981	
Ditto, Sargodha Division ...	13,434	354	915	...	8,210	...	9,982	3,574	5,482	41,951	
Ditto, Kirana Division ...	10,070	...	...	...	10,885	2,377	3,662	2,244	3,346	32,584	
Ditto, Shahpur Division ..	1,971	...	...	...	177	...	135	...	...	2,283	
Total for 1914-15 to 1916-17 ...	2,01,926	20,452	3,487	2,313	2,63,144	84,340	1,57,433	56,723	95,399	8,85,217	
Total for 1911-12 to 1913-14 ...	2,20,429	9,248	11,393	5,779	2,56,644	1,00,663	1,53,140	67,005	86,667	9,40,968	

STATEMENT No. VI (c).

EXPENDITURE ON ARBORICULTURE IN THE PROVINCIAL DIVISIONS DURING
THE TRIENNIAL PERIOD 1914-15 TO 1916-17.

1	2	3	4	5	6	7	8	9	10	11	12
District or Division.	WORKS								ESTABLISHMENT.	Total.	REMARKS.
	Ornamental gardens.		Nurseries.		Plantations and afforestation.		Groves and avenues.		General supervising establishment, including office establishment.		
	Maintenance and repairs of existing gardens.	Extension of gardens.	Maintenance and repairs of existing nurseries.	Extension of nurseries.	Maintenance and repairs of existing plantations and afforestation.	Extension of plantations and afforestation.	Maintenance and repairs of existing groves and avenues.	Extension of groves and avenues.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			
Rawalpindi Division ...	1,732	...	2,996	580	256	..	12,113	3,515	11,052	32,244	
Kangra Division ...	...	...	2,692	527	..	697	8,231	870	...	13,017	
Lahore Division No. I ...	...	...	976	...	...	...	5,735	...	...	6,710	
Lahore Division No. II ...	...	...	123	...	...	...	1,079	6,090	200	7,492	
Jullundur Division ...	391	...	6,317	...	...	...	40,946	5,117	52,771	1,05,542	
Lyallpur Division ...	1,933	...	1,068	222	...	...	10,332	1,596	759	15,915	
Multan Division ...	...	...	100	...	...	...	2,513	2,000	...	4,613	
Ambala Division ...	350	...	2,200	2,101	...	...	17,695	7,081	...	29,427	
Gurgaon Division ...	478	349	2,456	...	...	...	7,925	255	...	11,463	
Total 1914-15 to 1916-17 ...	4,889	349	18,927	3,430	256	697	1,06,569	26,524	64,782	2,26,423	
Total 1911-12 to 1913-14 ...	2,307	472	11,288	5,727	6,467	12,225	51,267	11,716	24,327	1,25,796	

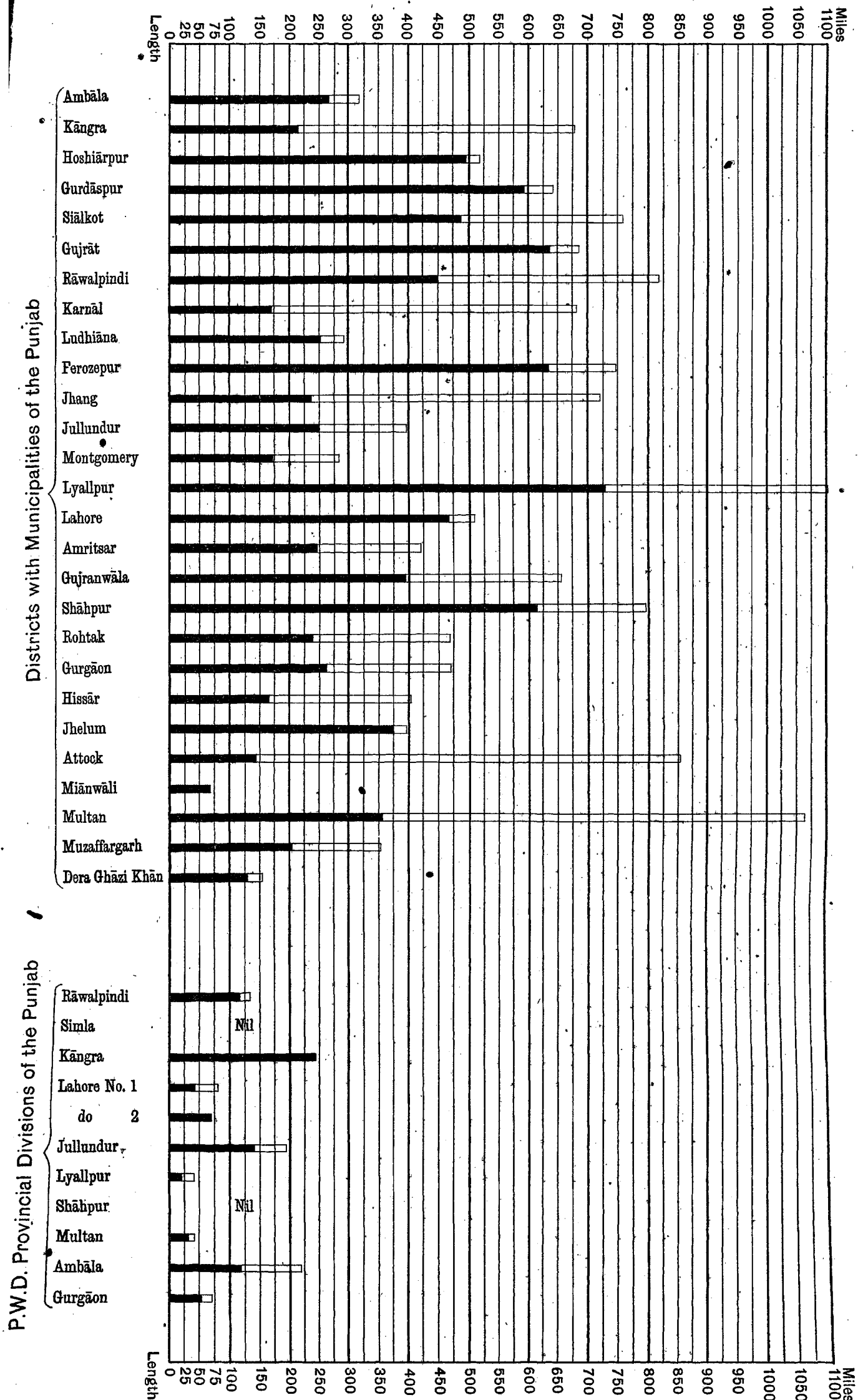
DIAGRAM SHOWING LENGTHS OF CANALS IN THE PUNJAB SUITABLE FOR SIDE PLANTING.



Reg. No. 241 F. 17-250

Note: Miles of Canals fully stocked are shown thus.....
do do still to be stocked do.....

DIAGRAM SHOWING LENGTHS OF ROADS IN DISTRICTS SUITABLE FOR ROADSIDE PLANTING



Reg. No. 242 F. 17-250

Note:- Miles of roads fully stocked are shown thus.....

Ditto to be stocked Ditto.....



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